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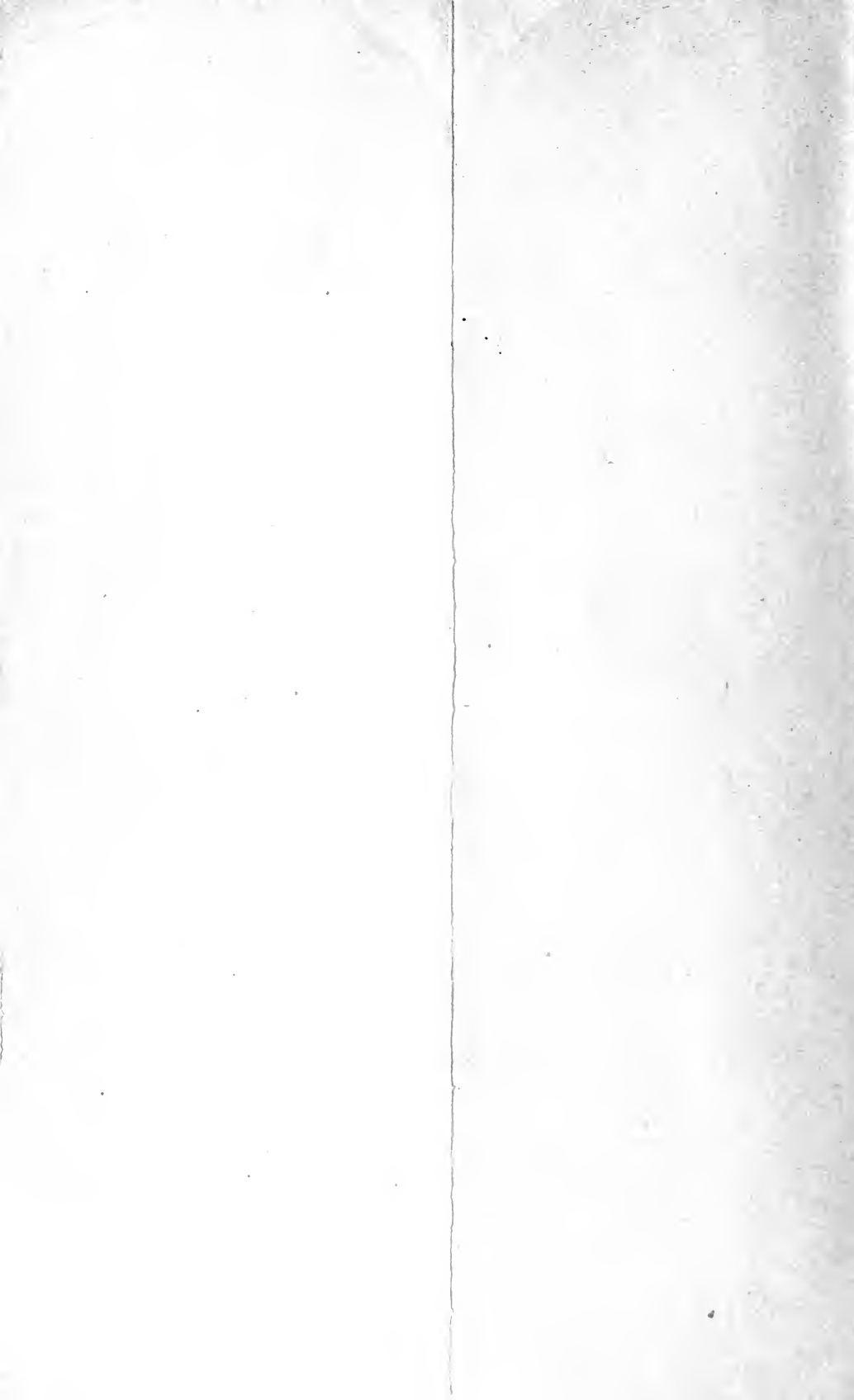
UNIFORM SYSTEM

FOR SPELLING

FOREIGN GEOGRAPHIC NAMES.



WASHINGTON:
NAVY DEPARTMENT.
1891.



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Hydrographer.

ON

UNIFORM SYSTEM

FOR SPELLING

FOREIGN GEOGRAPHIC NAMES.



WASHINGTON:
NAVY DEPARTMENT.
1891.

U. S. HYDROGRAPHIC OFFICE.

// No. 98.

REPORT

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INTRODUCTION.

The lack of a uniform and comprehensive system of spelling geographic names has been long felt, and many attempts have been made to overcome the difficulties operating to prevent the adoption of some one method that might in a measure settle the vexed question. To an office engaged in the publication of charts and sailing directions covering the waters of the globe the want of systematic method becomes especially formidable, inasmuch as the publications emanating from it are regarded as having the sanction of official authority, and without some uniform standard system to proceed upon doubt and confusion must necessarily be the result of inconsistencies and discrepancies, sometimes so great as to cause the same place to become unrecognizable under its various disguises in the way of spelling.

Foreign governments have long recognized this difficulty, and the hydrographic offices of Great Britain, France and Germany have carefully considered the subject, each taking the initiative in their respective countries. The Admiralty system, published in 1885, and adopted by the various departments of the government of Great Britain and the Royal Geographical Society, was the first step, and, by comparisons with the systems of France, Germany and Spain, as set forth in the table in the following pages, the tendency toward uniformity becomes apparent.

February 15, 1890, my predecessor, Captain H. F. Pickens, U. S. Navy, feeling the necessity of system in dealing with foreign geographic nomenclature, especially for the publications of this Office, which relate particularly to foreign waters, organized a Board to consider and report comprehensive rules on this subject.

In dealing with names in Asiatic and Polynesian languages, which are either unwritten or not written by the natives in Roman character, the Board was directed to investigate the system of rendering them adopted by the British Admiralty with a view to modifying this system, if necessary, and rendering it appropriate for adoption by this Office, or at its discretion to report an original system if sufficient objection against the British system was to be found. The Board consisted of the following members:

Lieutenant CHAS. M. McCARTENEY, U. S. N., Chief of Division of Sailing Directions.

Mr. BOYNTON LEACH, Assistant, the Editor of Notices to Mariners.

Mr. GUSTAVE HERRLE, Chief Draughtsman.

To deal intelligently with this subject, it was necessary to become fully acquainted with the official systems in vogue in the various countries and correspondence was begun with all foreign governments to obtain their views as much as possible, with the object of examining into their methods, and much valuable information was the result.

In this country, where duplication of charts and maps necessarily exists, considerable differences arose among the Bureaus on the subject of geographic nomenclature, and even in the same Departments there was a notable lack of uniformity. So great was this want of harmony that an endeavor was made among those most interested to do something in the way of removing this serious evil in the Government publications. A correspondence, originally carried on between the Hydrographer and the Superintendent of the Coast and Geodetic Survey, resulted in a further "correspondence with the heads of Departments and chiefs of Bureaus especially concerned in the production of charts, maps and other geographical publications being undertaken by the Superintendent of the Coast and Geodetic Survey, in which it was proposed to organize a board consisting of representatives from such Departments and Bureaus to which might be referred all questions arising in any of them relating to geographic names, the action of such board to be accepted as final, to the end that uniformity of nomenclature might be secured in all Government publications. The suggestion received favorable consideration in all quarters and resulted in the organization of the Board in April, 1890. After several meetings, in which much was done in the way of determining methods of procedure and general principles of control, as well as in the actual consideration of over a hundred cases, it was recognized that the importance of the work of the Board and the difficulties of an administrative character which might be anticipated required that its existence and organization should be strengthened by something in addition to a simple temporary convention among those most interested. Under the circumstances, executive authority could alone secure the universal adoption in all Government publications of the decisions of the Board. The matter was therefore brought to the attention of the President of the United States, who recognized the desirability of accomplishing the end proposed, and on September 4, 1890, issued an Executive Order formally creating the Board."*

* Bul. No. 1. U. S. Board on Geographic Names.

EXECUTIVE ORDER.

As it is desirable that uniform usage in regard to geographic nomenclature and orthography obtain throughout the Executive Departments of the Government, and particularly upon the maps and charts issued by the various Departments and Bureaus, I hereby constitute a Board on Geographic Names, and designate the following persons, who have heretofore co-operated for a similar purpose under the authority of the several Departments, Bureaus and Institutions with which they are connected, as members of said Board:

Professor THOMAS C. MENDENHALL, United States Coast and Geodetic Survey, chairman.

ANDREW H. ALLEN, Department of State.

Captain HENRY L. HOWISON, Lighthouse Board, Treasury Department.

Captain THOMAS TURTLE, Engineer Corps, War Department.

Lieutenant RICHARDSON CLOVER, Hydrographic Office, Navy Department.

PIERSON H. BRISTOW, Post Office Department.

OTIS T. MASON, Smithsonian Institution.

HERBERT G. OGDEN, United States Coast and Geodetic Survey.

HENRY GANNETT, United States Geological Survey.

MARCUS BAKER, United States Geological Survey.

To this Board shall be referred all unsettled questions concerning geographic names which arise in the Departments, and the decisions of the Board are to be accepted by these Departments as the standard authority in such matters.

Department officers are instructed to afford such assistance as may be proper to carry on the work of this Board.

The members of this Board shall serve without additional compensation, and its organization shall entail no expense on the Government.

BENJ. HARRISON.

EXECUTIVE MANSION,

September 4, 1890.

The U. S. Board on Geographic Names, established by Executive order, has thus far adopted for guidance, in determining the official form or rendering of geographic names, the following—

PRINCIPLES.

WITHIN THE UNITED STATES.

1. That spelling and pronunciation which is sanctioned by local usage should in general be adopted.
2. Where names have been changed or corrupted, and such changes or corruptions have become established by local usage, it is not in general advisable to attempt to restore the original form.
3. In cases where what was evidently originally the same word appears with various spellings, sanctioned by local usage, when applied to different features, these various spellings should be regarded as in effect different names, and as a rule it is inadvisable to attempt to produce uniformity.
4. Where a choice is offered between two or more names for the same place or locality, all sanctioned by local usage, that which is most appropriate and euphonious should be adopted.
5. The possessive form should be avoided whenever it can be done without destroying the euphony of the name or changing its descriptive application.
6. In all names ending in burgh the final *h* should be dropped.
7. In all names ending in borough this termination should be abbreviated to boro.
8. The word center as a part of the name should be spelled center and not centre.
9. The use of hyphens in connecting parts of compound names should be discontinued.
10. The letters C. H. (court house) as part of the names of county seats should be omitted.
11. In the case of compound names consisting of more than one word it is desirable to simplify them by uniting the compound parts.
12. It is desirable to avoid the use of diacritical characters.
13. It is desirable to avoid the use of the words city and town as a part of names.

OUTSIDE THE JURISDICTION OF THE UNITED STATES.

1. Geographic names in countries that use the Roman characters should be rendered in the form adopted by the country having jurisdiction, except when there are English equivalents already fixed by usage. In cases where the English equivalent is so different from the national form that the identity of the latter with the former might not be recognized both forms may be given.

2. The spelling of geographic names that require transliteration into Roman characters should represent the principal sounds of the word as pronounced in the native tongue in accordance with the sounds of the letters in the following system :

Letters.	Sounds.	Example.
a	ah, a as in father	Java, Banana, Somali, Bari.
e	eh, e as in men	Tel el Kebir, Oléleh, Medina. Levúka, Peru.
i	English e; i as in ravine; the sound of ee in beet. Thus, not Feejee, but	Fiji, Hindi.
o	o as in mote.	
u	double o, as in boot. All vowels are shortened in sound by doubling the fol- lowing consonant	Yarra, Tannia, Jidda, Bonni.
	Doubling of a vowel is only necessary where there is a distinct repetition of the single sound	Nunúfa.
ai	English i as in ice	Shanghai.
au	ow as in how. Thus, not Foochow, but	Fuchau.
ao	is slightly different from above	Nanao.
ei	is the sound of the two Italian vowels, but is frequently shurred over, when it is scarcely to be distinguished from ey in the English they	Beirút, Beilul.
b	English b.	
c	is always soft and nearly the sound of s; the hard c is given by k	Celébes.
ch	is always soft, as in church	Chingchin.
d	English d.	
f	English f; ph should not be used for the sound of f. Thus, not Halphong, but	Halfong, Nafa.
g	is always hard (soft g is given by j)	Galápagos.
h	is always pronounced when inserted.	
j	English j. Dj should never be put for this sound.	Japan, Jinchuen.
k	English k. It should always be put for the hard c. Thus, not Corea, but	Korea.
kh	the Oriental guttural	Khan.
gh	is another guttural, as in the Turkish	Dagh, Ghazi.
l	as in English.	
m		
ng	has two slightly different sounds, as in finger, singer.	
p	as in English.	
q	should never be employed; qu is given by kw	Kwangtung.
r		
s		
t		
v	as in English	Sawákin.
w		
x		
y	is always a consonant, as in yard (Kikuyu), and there- fore should not be used for the vowel i. Thus, not Mikindany, but	Mikindáni.
z	English z. Accents should not generally be used, but where there is a very decided, emphatic syllable or stress which affects the sound of the word it should be marked by acute accent	Zulu. Tongatábu, Galápagos, Pa- láwan, Saráwak.

An approximation only to the true sound is aimed at in this system. The vowels are to be pronounced as in Italian and on the continent of Europe generally, and the consonants as in English.

It will be seen by these principles that the U. S. Board on Geographic Names, in keeping with the spirit of the Executive Order, seeks by practical methods to bring about uniformity in geographic nomenclature.

The work within the United States is mainly one of selection from forms now existing, and these selections it is evident must depend upon fitness and established usage. Outside of the United States, where the Hydrographic Office is mostly interested, as it publishes charts and sailing directions of all foreign waters, the conditions are different, and the Board is guided by the official or established usage in countries where such official forms are given in the Roman characters.

For the proper interpretation of the geographic names of a foreign country it is necessary to know what are the forms of correct usage in that country, and where other than Roman characters are used what are the proper equivalents for transliteration. It is hoped that the report of the Hydrographic Office Board will be of service in that connection.

All the chart and map producing countries are now practically in accord in their rules for geographic nomenclature, but the working of these rules may not be immediate. The French Hydrographer, in reply to our inquiry as to why the names on French charts of Tongking do not conform to their published rules, stated that the copper plates were engraved prior to the adoption of the system, and hence the change could not be radical, but would come in time. The United States Board has made provisions that its decisions may remain in abeyance under like circumstances, and only take place in new work. It will thus be seen that what is sometimes apparently an official form of a geographic name is not in fact the form adopted and which at a later period will universally prevail.

This report of the Board of the Hydrographic Office is published for the consideration of the U. S. Board on Geographic Names, to which it has been submitted.

RICHARDSON CLOVER,
Lieutenant-Commander, U. S. N., Hydrographer.

HYDROGRAPHIC OFFICE,
Washington, D. C., 1891.

REPORT.

REPORT

OF THE

U. S. HYDROGRAPHIC OFFICE BOARD

ON THE

ORTHOGRAPHY OF GEOGRAPHIC NAMES.

SIR: A uniform system of spelling geographic names is a necessity for the publications of this Office, and it should be one as far as possible in accord with the systems of other nations. To learn the uses prevailing in regard to this subject in foreign countries generally, Hydrographic Office circular letter of March 28, 1890 (Exhibit A, Appendix), was addressed to all the Hydrographic Offices in foreign countries, and to various geographic societies and to individuals, replies to which up to date have been received from the following:

1. The Hydrographer of Great Britain:
 Captain W. J. L. Wharton, R. N., F. R. S....Exh. B, Appendix.
2. The Hydrographer of France :
 A. Bouquet de la GryeExh. C, Appendix.
3. The Secretary of the Imperial German Marine:
 Captain Mensing..Exh. D, Appendix.
4. The Hydrographer of Spain:
 Pelayo Alcalá Galiano..... Exh. E, Appendix.
5. The Marine Department at Ottawa, Canada :
 John Hardie.....Exh. F, Appendix.
6. The Hydrographer of Chile:
 Francisco Vidal Gormaz.....Exh. G, Appendix.
7. The Hydrographer of the Netherlands :
 Captain H. A. de Smit v. d. Broecke.....Exh. H, Appendix.
8. The Hydrographer of Netherlands India :
 A. C. J. Edeling.....Exh. I, Appendix.
9. The Hydrographer of Italy :
 A. BiancheriExh. J, Appendix.
10. The Chief of the Coast Pilot Bureau of Austria-Hungary :
 Captain F. Baron de HaanExh. K, Appendix.

11. The Director of the Archive of Sea Charts of Denmark :
G. Holm.....Exh. L, Appendix.
12. The Hydrographer of Japan :
Captain K. KimotsukiExh. M, Appendix.
13. The Chargé d'Affaires of H. I. J. M. Legation :
Aimaro Sato.....Exh. N, Appendix.
14. Ensign John B. Bernadou, U. S. N.....Exh. O, Appendix.
15. Captain A. M. Bisbee, Coast Inspector, Shanghai..Exh. P, Appendix.
16. The Inspector General, Imperial Chinese Customs
Service.....Exh. Q, Appendix.
17. The United States Minister to Greece, forwarding
a map and statistical catalogue of Greece.
18. The U. S. Minister to Mexico, forwarding Mexican
official publications.....Exh. R, Appendix.

The valuable and interesting information received through these letters has been of much assistance to the Board in its labors, and is hereby gratefully acknowledged.

In looking over the field, we find within the past five years efforts made to eradicate the existing confusion by the adoption of fixed systems of orthography on the part of the Hydrographic Offices of Great Britain, France and Germany. In Great Britain the Hydrographic Office or British Admiralty system was adopted in 1885, also by the Royal Geographical Society. In France, a commission appointed by the Société de Géographie, on which the French Hydrographer, Mons. Bouquet de la Grye, acted as secretary, reported in 1886 a system largely formulated after the British and on propositions of the French Hydrographic Service. The German Hydrographic Office adopted rules in 1888, which also closely follow the British system.

In examining these three systems, copies of which are appended to this report, it will be seen that they divide all geographic names into two classes, on the following propositions :

1. Geographic names originating in languages that are written in Roman character should be spelled as in the country having jurisdiction. The French and German systems allow exceptions to this rule in the case of names which, through long custom, have become generally known in another form.

2. Geographic names originating in languages without literature, and in languages that require transliteration into Roman character, should have their spelling based on the true sound of the word as locally pronounced.

In regard to the phonetic values of the letters in names of the second

class, the three systems show a remarkable agreement, as seen in the comparative table on page 35, resulting from the adoption by the British of the Italian or continental vowel sounds, and from the adoption, to a very large extent, of the English consonantal sounds by the French and German Hydrographic Offices. All three systems, however, permit exceptions in names of class 2, where long used orthography, though it may not be in accordance with the adopted rules, has become generally familiar.

The three systems also recognize the futility of providing for the more delicate inflections of sound and accent in foreign names of class 2, by discarding diacritical signs, the British and German systems confining themselves to the use of the acute accent, and the French retaining only the accent circumflex (ˆ) and the apostrophe (').

As far as known to us, none of the other Hydrographic Offices besides the British, French and German, have as yet any fixed system of orthography in use, unless we except Spain, whose Hydrographer in his reply (Exh. E, Appendix) to the Hydrographic Office circular letter, outlines a system which is mainly based on that of the French, and which is intended to be adhered to in future Spanish Hydrographic Office publications. This Spanish system has been incorporated in the table on page 35, so that it can be readily compared with the others.

A study of the comparative table referred to suggests the possibility of future international agreement as to the phonetic value to be attributed to each letter in spelling geographic names requiring treatment from a phonetic basis. Practically but few differences now exist, and these might be eradicated by an international congress.

We confidently hope that a strict adherence by the British, French and German Hydrographic Offices to the systems adopted by them, and a strict adherence to the rules which we have the honor to propose for the guidance of this Office, will lead from year to year to a closer agreement in the rendering of geographic names in the nautical publications of the principal nations, and thus pave the way toward a much desired international uniformity.

The difficulties in the way of practical application of these systems are various and many, and not the least is the uncertainty existing in regard to the correct local pronunciation of many of the names in distant foreign lands that use another than the Roman character in their writing, and many years will pass before these difficulties will have disappeared. Where the local pronunciation of the name is absolutely known, it may be readily spelled under the general system, but where the written form only is available, detailed systems in harmony

with the general system can be advantageously used for transliterating, and thus assist in bringing about the ultimate object. The Board has prepared such systems (which are herewith submitted) for application to Russian, Greek, Japanese and Korean geographic names, and has formulated rules and data, so far as possible, with the information at hand, for guidance in treating Malay and Chinese names.

In regard to the names of India, we recommend a close adherence to the forms found in Hunter's Imperial Gazetteer of India, a work which "has been adopted as the guide for Hindustan by the British Admiralty, the Royal Geographical Society, and others." Although a number of the names contained in it are not spelled in conformity with the British and our proposed system of letter equivalents, it is, however, the best authority available, and we trust that the spelling which now forms exceptions to the rules will in time be modified, since in the majority of cases the change required would be but very slight.

We regret that the limited data at our disposal does not permit us to propose any additional systems of transliteration, and we confine ourselves therefore to merely general recommendations in regard to the treatment of the geographic names of all other countries, the languages of which require transliteration. Since we must, *as a rule*, depend for the orthography of geographic names on the original hydrographic surveys, by whatever nation made, it is necessary to consider the date of the survey and the nationality of the surveyor or explorer, and to exercise a proper discrimination: First, in the case where two or more different names are found for the same object; and, second, in the case where the same name is found differently spelled. In the former case the compiler must base his judgment on the value of the authorities before him, and on the character of the language involved, and, having decided on the proper name, he must see, as he must also in the second case, that the orthography of the name be brought in harmony with the new system sought to be established.

It is to be presumed that on the new nautical charts issued by the British Admiralty and the French Hydrographic Office, since about 1886, the nomenclature is already to a great extent in conformity with the new systems adopted by these offices, and it is therefore mainly in the charts of earlier date (although the same may bear the marks of correction to a later date) where the greater difficulties in regard to geographic names will be encountered.

Considerable time, however, must elapse before the orthography of many names in certain parts of the world can be regarded as settled, since new surveys and explorations constantly bring to our knowledge new names or changes in old forms of names.

In the transliteration of foreign languages which have no alphabetical system corresponding to ours, or none at all, it is essential that every letter shall always represent but one sound; otherwise, it would be impossible, without a knowledge of the particular language, when written in Roman character, to know whether, for instance, an *i* should be pronounced as *i* in *wine* or as *i* in *bid*, or as *e* in *end*, or *e* in *be*, &c. The differences in the phonetic values of English vowels have always constituted one of the main difficulties for a uniform transliteration of such languages, since a book printed according to the English system of spelling would show such discrepancies from one printed according to the German or French system, that a people who had become accustomed to read the one would be unable to understand the other. This consideration, therefore, leads to the adoption of the continental vowels in the spelling of foreign geographic names not written in Roman character.

The frequent occurrence of the sounds *ö* (œ) and *ü* (ue) in a number of foreign languages justifies, we believe, the adoption of the letters *ö* and *ü* to represent these sounds in our general system.

While it is not advisable to immediately alter the orthography of names fixed by long usage, provision should be made for eventually bringing them under the uniform system. This should be done, when deemed advisable, by giving the name as it is spelled under the general system, and appending in brackets the familiar name, so that in time as the former becomes familiar to English speaking peoples the latter may be dropped.

In using the tables of equivalents provided in the detailed systems, it must be remembered that the sound character is not always provided for in all its phases, but attention is called to its peculiarities and it is left to the intelligent compiler to study the niceties of the pronunciation and apply the general system to the determination of the phonetic equivalent.

STANDARD RULES.

ORTHOGRAPHY OF GEOGRAPHIC NAMES.

(a) The more prominent geographic names, the orthography of which is already fixed by universal adherence to a certain form, or which are spelled in *but one way* in American and English literature, shall not be changed, although their spelling may not be in accordance with rules (b) and (c). Examples: Athens, Bombay, Ceylon, Germany, Spain, St. Petersburg.

(b) Geographic names in countries which use the Roman or Gothic characters in writing their language shall be rendered in the form found in the latest official publications, maps and books of the country having jurisdiction. In cases, however, where the form of a place name hitherto used is so different from the official form that the identity of the latter with the former might not be recognized, the old form shall be added in brackets; as, for instance, Livorno (Leghorn), s'Gravenhage (The Hague), Wien (Vienna).

Where there is a conflict of jurisdiction, as it were, over a geographic name as, for instance, in the name of a body of water separating two or more countries, or as in Polynesian or African names, rule (a) or (c) shall be applied. Thus, Swedish and Norwegian *Skagerak*, Danish *Skagerrak*, is an example where choice lies only in the spelling, and under rule (a) preference is given to double r, *Skagerrak*; but in the Baltic (Baltiskoe more, Baltisches Meer, Ostsee, Östersjön, Østersøen) the choice lies first in the proper name, and Baltic is retained under rule (a), while the Dutch, Spanish or other rendering of Polynesian names must be treated under rule (c) if not in accord with the general system.

(c) Geographic names from languages that require transliteration into Roman character and geographic names originating in languages without literature shall have their spelling based on the true sound of the word as locally pronounced and in accordance with the general system of sound equivalents given below.

On account of difficulties inherent in the English language, an approximation to the true sound is alone aimed at in this system, the principal characteristic of which is that all vowels are pronounced as on the continent of Europe generally and all consonants as in English.

General System.

Letters.	Pronunciation and remarks.	Examples.
a	ah, a as in father	Java, Banana, Somali, Bari.
e	eh, e as in benefit.....	Tel el Kebir, Oléleh Medina, Levúka, Peru.
i	English e: i as in ravine; the sound of ee in beet. Thus, not Feejee, but.....	Fiji, Hindi.
o	o as in mote.....	Tokyo.
u	long u as in flute; the sound of oo in boot. Thus, not Zooloo, but.....	Zulu, Sumatra.
ö	German ö (œ).....	Söchhön.
ü	The French sound of u (ü); or the German ü (ue).....	Börküt.
	All vowels are shortened in sound by doubling the following consonant.....	Yarra, Tanna, Jidda,
	Doubling of a vowel is only necessary where there is a distinct repetition of the single sound.....	Nuulúa.
ai	English i as in ice.....	Shanghai.
au	ow as in how. Thus, not Foochow, but.....	Fuchau.
ao	is slightly different from above.....	Nanao.
ei	is the sound of the two Italian vowels, but is frequently slurred over, when it is scarcely to be distinguished from ey in the English they.....	Beirút, Bellul.
b	English b.....	
c	is always soft and nearly the sound of s; the hard c is given by k.....	Celébes.
ch	is always soft, as in church.....	Chingchin.
d	English d.....	
f	English f: ph should not be used for the sound of f. Thus, not Haiphong, but.....	Haifong, Nafa.
g	is always hard (soft g is given by j).....	Galápagos.
h	is always pronounced when inserted.....	
j	English j. Dj should never be put for this sound.....	Japan, Jinchuen.
k	English k. It should always be put for the hard c. Thus, not Corea, but.....	Korea.
kh	the Oriental guttural.....	Khan.
gh	is another guttural, as in the Turkish.....	Dagh, Ghazi.
l	as in English.....	
m	as in English.....	
n	has two slightly different sounds, as in finger, singer.....	
ng	as in English.....	
p	should never be employed; qu is given by kw.....	Kwangtung.
q		
r		
s	as in English.....	Sawákin.
t		
v		
w		
x		
y	is always a consonant, as in yard (Kikúyu), and, therefore, should not be used for the vowel i. Thus, not Mikindány, but.....	Mikindáni.
z	English z.....	Zulu.
	Accents should not generally be used; but where there is a very decided emphatic syllable or stress, which affects the sound of the word, it should be marked by an acute accent..	Tongatábu, Galápagos, Paláwan, Saráwak.

To better secure uniformity in the transliteration of geographic names from certain languages, the general system here outlined is augmented by detailed systems of letter and syllabic equivalents, which should be strictly followed.

RUSSIAN.

A careful study of various authorities on English equivalents for the Russian alphabet, including a system published in "Nature," as adopted by many scientific institutions, convinced the Board that the main objections to these systems, apart from disagreement as to occasional sounds, are comprised in the use of diacritical marks and in the English equivalents rendered for the Russian Ж and Θ.

Ж is variously represented in English by z, zh, s, sh, ch and j, but none exactly fill the requirements. In geographic names Ж appears to be best represented by the soft or French sound of j, as in *jour*. This was demonstrated to the Board in the pronunciation by an expert (Mr. L. F. von Wimpffen, of the Hydrographic Office) of numerous Russian names wherein this character occurs. For example: Жонкьеръ [Jonkier], Жужмуйскій [Jujmuiski(i)],* Моржовскій [Morjovski(i)],* Жижгинскій [Jijginski(i)].* The French use j as the equivalent for the Russian Ж.

Θ, equivalent to ph in English, has the same sound as f. It is used only in words derived from the Greek, and in such words the English *ph* or *th* represents the Grecian character. The English sound of *th* as in *that* or *this* has no equivalent in the Russian alphabet. As the main object is not to trace the origin of words, but to attain approximately the local pronunciation, the letter f should be used as the equivalent for Russian Θ.

Diacritical marks are not necessary and are a source of great trouble in chart construction and geographic publications generally. Their use can be avoided by representing the Russian vowels е and э by e, the vowels и, i, and the semi-vowel ъ by i, and by not representing the Russian semi-vowels Ъ and Ы, which have no sound by themselves.

The system adopted by the British Admiralty is free from the objections found by the Board to other systems, and the only change recommended is an unimportant one, so far as Russian names are affected, viz: ö instead of the diphthong æ as the equivalent for v.

Occasional sounds are not provided for in the following table. Whenever they can be accurately determined they may be represented by corresponding sound equivalents selected from the general system.

* Doubling of a vowel is only necessary where there is a distinct repetition of the single sound.

RUSSIAN.			ENGLISH EQUIVA- LENTS.	RUSSIAN.			ENGLISH EQUIVA- LENTS.
А.....а	<i>А.....а</i>	<i>а</i>	<i>а</i>	Т.....т	<i>Т.....т</i>	<i>т</i>	<i>t</i>
Б.....б	<i>Б.....б</i>	<i>б</i>	<i>b</i>	У.....у	<i>У.....у</i>	<i>у</i>	<i>u</i>
В.....в	<i>В.....в</i>	<i>в</i>	<i>v</i>	Ф.....ф	<i>Ф.....ф</i>	<i>ф</i>	<i>f</i>
Г.....г	<i>Г.....г</i>	<i>г</i>	<i>g</i>	Х.....х	<i>Х.....х</i>	<i>х</i>	<i>kh</i>
Д.....д	<i>Д.....д</i>	<i>д</i>	<i>d</i>	Ц.....ц	<i>Ц.....ц</i>	<i>ц</i>	<i>tx</i>
Е.....е	<i>Е.....е</i>	<i>е</i>	<i>e</i>	Ч.....ч	<i>Ч.....ч</i>	<i>ч</i>	<i>ch</i>
Ж.....ж	<i>Ж.....ж</i>	<i>ж</i>	<i>j</i>	Ш.....ш	<i>Ш.....ш</i>	<i>ш</i>	<i>sh</i>
З.....з	<i>З.....з</i>	<i>з</i>	<i>z</i>	Щ.....щ	<i>Щ.....щ</i>	<i>щ</i>	<i>shch</i>
И.....и	<i>И.....и</i>	<i>и</i>	<i>i</i>	Ъ.....ъ	<i>Ъ.....ъ</i>	<i>ъ</i>	<i>.</i>
І.....і	<i>І.....і</i>	<i>і</i>	<i>i</i>	Ы.....ы	<i>Ы.....ы</i>	<i>ы</i>	<i>ui</i>
К.....к	<i>К.....к</i>	<i>к</i>	<i>k</i>	Ь.....ь	<i>Ь.....ь</i>	<i>ь</i>	<i>.</i>
Л.....л	<i>Л.....л</i>	<i>л</i>	<i>l</i>	Ѣ.....ѣ	<i>Ѣ.....ѣ</i>	<i>ѣ</i>	<i>ye</i>
М.....м	<i>М.....м</i>	<i>м</i>	<i>m</i>	Э.....э	<i>Э.....э</i>	<i>э</i>	<i>e</i>
Н.....н	<i>Н.....н</i>	<i>н</i>	<i>n</i>	Ю.....ю	<i>Ю.....ю</i>	<i>ю</i>	<i>yu</i>
О.....о	<i>О.....о</i>	<i>о</i>	<i>o</i>	Я.....я	<i>Я.....я</i>	<i>я</i>	<i>ya</i>
П.....п	<i>П.....п</i>	<i>п</i>	<i>p</i>	Ѳ.....ѳ	<i>Ѳ.....ѳ</i>	<i>ѳ</i>	<i>f</i>
Р.....р	<i>Р.....р</i>	<i>р</i>	<i>r</i>	Ѵ.....ѵ	<i>Ѵ.....ѵ</i>	<i>ѵ</i>	<i>ö</i>
С.....с	<i>С.....с</i>	<i>с</i>	<i>s</i>	Ѷ.....ѷ	<i>Ѷ.....ѷ</i>	<i>ѷ</i>	<i>i</i>

GREEK.

English classical literature has established the orthography of numerous Greek geographic names, though in numerous cases with little success in attaining even an approximation to native pronunciation. Apart from pronunciation, a fixed way of spelling a name is the desideratum. Therefore, it is to names now spelled in two or more ways, or such as are not familiar or require but slight change, that a system for bringing about uniformity should be immediately applied. Gradually as the system becomes familiar to English speaking peoples, it may extend itself to include all inconsistencies.

Seeking Roman equivalents for Greek alphabetical characters, it becomes necessary for the sake of producing the uniformity universally sought, to keep in mind the general system adopted for the transliteration of geographic names, and to use the phonetic values provided for therein. Classical literature of the English language, and the disinclination of English speaking peoples to abandon the many inconsistencies of their language as regards phonetic values, render the practical application of such system extremely difficult, inasmuch as changes in spelling are introduced that drop out entirely several familiar English equivalents, and which perhaps represent the native sound better than those which are substituted. But as English pronunciation of foreign names is at best a rough approximation, it can not well wander further from the true pronunciation under the new system than with the old, and the compensation for the changes, primarily brought about, will be the uniformity gained in the spelling of geographic names under the system to which so many foreign nations are now committed, either by official announcement or practical acquiescence.

The Greek characters which are most troublesome, and which under the new system of transliteration will necessitate the greatest number of changes in spelling geographic names, are *Γ*, *Η*, *Ι*, *Φ* and *Χ*, also the diphthongs.

Γ, like the Russian *Г*, with its various sounds can not be accurately represented by any English character, but is approximately represented by *G*. In some cases *yh*, *gh* and *ng*, or the consonant *y*, represent nearly the sound of *Γ*, and it should be so represented. The same applies to *Χ* (also Russian *Х*), English *H* being only a rough approximation. The German *ch*, or better the Spanish *j*, represents very nearly or perhaps exactly the sound of *Χ*, and therefore it is best represented by *kh*. Having heretofore been represented by *ch*, the change is merely *c* to *k* under the general rule.

ϕ is well represented by F or Ph, but, under the rule, Ph should not be employed.

H has the sound of *e* in *me*, *ee* in *flee*, and is generally represented by *e*, but under the general rule becomes *i*.

γ has the sound of *y* in *system*, *i* in *sister* or in *history*, and is therefore well represented by the English *i* or *y*, preference having been generally given to *y*, but as the general rule precludes the use of *y* as a vowel, another burden must be placed upon *i* which replaces the vowel *y*. In many cases γ changes to the sound of English *f* and *v*, and in such should be so represented.

The diphthongs $\alpha\iota$ and $\omicron\upsilon$ are represented, respectively, by English *ai* as in *gain*, *ey* as in *they*, and $\omicron\upsilon$ as in *soup*; therefore, under the rule $\alpha\iota$ becomes *ei* and $\omicron\upsilon$ becomes *u*.

In the diphthongs $\alpha\upsilon$, $\varepsilon\upsilon$ and $\gamma\upsilon$ the υ before β , γ , δ , λ , μ , ν , ρ , ξ , σ , and the vowels has the sound of *v* as in *avow*; before all other consonants υ has the sound of *f* as in *after*. Therefore, under the general rule, the diphthongs $\alpha\upsilon$, $\varepsilon\upsilon$, $\gamma\upsilon$ should be represented, respectively, by *av* or *af*, *ev* or *ef*, and *iv* or *if*. The diphthongs $\varepsilon\iota$, $\omicron\iota$ and $\upsilon\iota$ are so similar in sound that they are approximately represented under the general rule by *i*, as are the vowels γ , ι and υ .

The argument against the use of diacritical signs applies forcibly to Greek names. The acute accent (') for denoting the syllable on which the stress of the voice should rest in pronunciation is however important.

The following table of English equivalents for modern Greek alphabetical characters employed in Greek geographic names is recommended as a general guide in connection with the general system adopted for the transliteration of geographic names not written in Roman characters. It has been tested by practical application to numerous names found in a recent publication of the Greek War Department, and proves more satisfactory than anticipated so far as radical changes in spelling are concerned:

A short list of examples is appended, showing the modern Greek official name, the ordinary English name, and the name as it appears under the new system transliterated from the official Greek:

GREEK.	ENGLISH EQUIVALENTS.	GREEK.	ENGLISH EQUIVALENTS.	GREEK DIPHTHONGS.	ENGLISH EQUIVALENTS.
<i>A</i> <i>a</i>	A a	<i>N</i> <i>ν</i>	N n	<i>αι</i>	ei
<i>B</i> <i>β</i>	V v	<i>Ξ</i> <i>ξ</i>	X x	<i>ει</i>	i
<i>Γ</i> <i>γ</i>	G g	<i>Θ</i> <i>ο</i>	O o	<i>οι</i>	i
<i>Δ</i> <i>δ</i>	D d	<i>Π</i> <i>π</i>	P p	<i>ου</i>	u
<i>E</i> <i>ε</i>	E e	<i>Ρ</i> <i>ρ</i>	R r	<i>υι</i>	i
<i>Z</i> <i>ζ</i>	Z z	<i>Σ</i> <i>σ ζ</i>	S s	<i>αυ</i>	af, av
<i>H</i> <i>η</i>	I i	<i>Τ</i> <i>τ</i>	T t		
<i>Θ</i> <i>θ</i>	Th th	<i>Υ</i> <i>υ</i>	I i	<i>ευ</i>	ef, ev
<i>I</i> <i>ι</i>	I i	<i>Φ</i> <i>φ</i>	F f		
<i>K</i> <i>κ</i>	K k	<i>Χ</i> <i>χ</i>	Kh kh	<i>ηυ</i>	if, iv
<i>Λ</i> <i>λ</i>	L l	<i>Ψ</i> <i>ψ</i>	Ps ps		
<i>M</i> <i>μ</i>	M m	<i>Ω</i> <i>ω</i>	O o		

MODERN GREEK.	USUAL ENGLISH SPELLING.	PROPOSED SYSTEM.
<i>Κεφαλληνία</i> . . .	Cephalonia, Cephellenia, Cephallenia	Kefallinía.
<i>Ίθάκη</i>	Ithaca, Ithaque, Ithaki	Itháki.
<i>Χαλκίς</i>	Chalcis, Chalkis	Khalkis.
<i>Βαθὺ</i>	Vathy, Vathi	Vathi.
<i>Κόρινθος</i>	Corinth, Korinth	Korinthos.
<i>Γαλαξείδιον</i> . . .	Galaxidi, Galaxhidhi	Galaxídion.
<i>Ανδρομάκη</i> . . .	Andromache, Andromachi	Andromáki.
<i>Εὐβοία</i>	Eubœa	Envia.
<i>Λευκάτα</i>	Leucata, Leucato	Lefkata.
<i>Δουκάτα</i>	Ducato, Dukato	Dafkata.
<i>Λευκάς</i>	Leucas, Leucadia	Lefkas.
<i>Γέρακα</i>	Ieraka	Yeraka.

JAPANESE.

Japanese is an isolated language spoken also outside of the Japan islands proper in the Riu Kiu, or, as they are called by the Chinese, the Liu Kiu islands. It has incorporated in its vocabulary many Chinese words and the language of the Celestials is as generally known to the educated Japanese as Latin or Greek to the students of Europe and America. The strides made by the Japanese in the line of western civilization, and especially in scientific pursuits, have been so great that, so far as our special subject is concerned, we can place to-day Japan in the list of countries with an official geographic nomenclature in Roman character.

The causes which made this possible in so short a time were, in the first place, the establishment in Japan of geographic and hydrographic services, and the consequent publication of numerous nautical and other charts, which have made us better acquainted with that country and its geographic nomenclature; and again, the Japanese have taken hold with much zeal of the idea of writing their language in Roman character. To reach uniformity in the transliteration of their syllabary, a society was formed in Japan under the name of the Romaji-Kwai, whose system is now very generally adopted, and also used as the standard by the Japanese Hydrographic Office for its publications.

These publications now form the original sources of information in regard to the orthography of Japanese geographic nomenclature, and it was, therefore, our endeavor to collect such data as will be of value for the U. S. Hydrographic Office in the application of a fixed system of transliteration.

At one of its earliest sessions the Board addressed a communication to the Japanese Minister in this city, requesting information on the subject under consideration, a copy of which, together with the reply, will be found in the appendix. A copy of the Hydrographic Office circular letter on geographic nomenclature was also sent to the Japanese Hydrographer at Tokyo, who, under date of May 8, 1890, sent the reply given in the appendix. Shortly after its convocation, the Board came also into possession of a copy of "A Concise Dictionary of the Principal Roads, Chief Towns and Villages of Japan," &c., published in 1889, by W. N. Whitney, M. D., Interpreter of the United States Legation at Tokyo, and of a copy of the fourth edition of the "Japanese-English and English-Japanese Dictionary," by J. C. Hepburn, M. D., LL. D., Tokyo, 1888, two very valuable aids to its work, and in both of which the spelling in Roman character is in accord with the system of the Romaji-Kwai.

The Board consulted also Mr. T. Nakayama, a Japanese student at present sojourning in Washington, who kindly answered many questions relative to Japanese geographic names, and to whom we are especially indebted for making us acquainted with a most valuable dictionary of the Chinese ideographs with their equivalents in Japanese kana.

The lettering on the charts published by the Hydrographic Office at Tokyo is printed in Chinese characters and Japanese kana, and on the charts embodying original Japanese surveys all the more prominent names are also added in Roman character; but, on charts which are mere republications of foreign surveys, this latter feature is omitted. The main difficulty, therefore, lies in the correct transliteration of the Chinese characters found on these charts, a difficulty which is greatly lessened with the aid of the books referred to above.

THE JAPANESE SYLLABARY.

In place of an alphabet, the Japanese have a syllabary represented by seventy-four distinct characters, including the final *n* (ン). Among these are several having the same sound, as イ and 伊 for *i*; エ and ヱ for *e*; ジ and ぢ for *ji*, and ヅ and づ for *zu*, leaving seventy sounds, if we distinguish the sound of っ from that of っ, both of which in the *Gu-jo-on* in Hepburn's Dictionary are represented by *o*, but which, in the table of syllables adopted by the Board, correspond to *o* and *wo*, respectively. For convenience sake we made a somewhat different arrangement of the syllables from that of Hepburn, and the equivalents given were supplied through the courtesy of Mr. Aimaro Sato, Japanese chargé d'affaires in this city (see letter in appendix). The equivalents in Roman character are in accord with the *Romaji-Kwai* system.

Japanese Syllabary.

ア.....a	イ.....i	ウ.....u	エ.....e	オ.....o
カ.....ka	キ.....ki	ク.....ku	ケ.....ke	コ.....ko
ガ.....ga	ギ.....gi	グ.....gu	ゲ.....ge	ゴ.....go
サ.....sa	シ.....shi	ス.....su	セ.....se	ソ.....so
シャ.....xa	ジ.....ji	ズ.....zu	ゼ.....ze	ゾ.....zo
タ.....ta	チ.....chi	ツ.....tsu	テ.....te	ト.....to
ダ.....da	ヂ.....ji	ヅ.....zu	デ.....de	ド.....do
ナ.....na	ニ.....ni	ヌ.....nu	ネ.....ne	ノ.....no
ハ.....ha	ヒ.....hi	フ.....fu	ヘ.....he	ホ.....ho
バ.....ba	ビ.....bi	ブ.....bu	ベ.....be	ボ.....bo
パ.....pa	ピ.....pi	プ.....pu	ペ.....pe	ポ.....po
マ.....ma	ミ.....mi	ム.....mu	メ.....me	モ.....mo
ヤ.....ya	イ.....i	ユ.....yu	エ.....ye	ヨ.....yo
ラ.....ra	リ.....ri	ル.....ru	レ.....re	ロ.....ro
ワ.....wa	ヰ.....i	ウ.....u	エ.....e	ヲ.....wo
ヱ.....final n				

SYSTEM OF PRONUNCIATION AND ORTHOGRAPHY.

Fortunately the pronunciation of the vowels and consonants in the Romaji-Kwai system of transliteration is in accord with our general phonetic rules, with the slight exceptions here noted:

- u—as in rule, tune, except in the syllables tsu, zu and su, when it has a close sound, resembling as near as possible the sound of *u* pronounced with the vocal organs fixed in the position they are in just after pronouncing the letter *s*.

- f**—has a close resemblance to the sound of the English *f*, but differs from it in that the lower lip does not touch the upper teeth; the sound is made by blowing *fu* softly through the lips nearly closed, resembling the sound of *wh* in *who*; *fu* is an aspirate and might for the sake of uniformity be written *hu*.
- g**—in the Tokyo dialect has the soft sound of *ng*, but in Kyoto, Nagasaki and the southern provinces it is pronounced hard as in *go* and *gain*.
- r**—in *ra*, *re*, *ro* and *ru* has the sound of the English *r*, but in *ri* is pronounced more like *d*. This is not invariable, as many natives give the common *r* sound.
- se**—in Kyoto, Nagasaki and the southern provinces is pronounced *she*, and *ze* like *je*.
- n**—The final *n* at the end of a word has always the sound of *ng*, as *mon*=*mong*, *san*=*sang*; but at the end of a syllable in the body of a word when followed by the letter *b*, *m* or *p* it is pronounced *m*, as *ban-min*=*bamming*, *mon-ban*=*mombang*; *shin-pai*=*shim-pai*. Before the other consonants it has the sound of *n* simply.

The sound of *l* is unknown to the Japanese, and he substitutes for it in foreign words the letter *r*, while just the reverse is the case with the Chinese. Thus, "mile" in Japanese is *ri* and in Chinese *li*, and the Chinese *Liu Kiu* is in Japanese *Riu Kiu*, &c.

In addition to the above there are in Japanese other peculiarities between writing and speech which, as they affect to some extent the orthography of geographic names, should be understood when transliterating Japanese into Roman character.

Thus, the syllables commencing with the soft aspirates *h*, *f* and *y* when preceded by another syllable for the most part lose their consonants and their vowels combine with the vowel of the preceding syllable, sometimes forming a diphthong, as *kahi* (カヒ) becomes *kai*, *hofu* (ホフ) becomes *hō*, *tofu* (トフ) becomes *tō*, *yofu* (ヨフ) becomes *yō*, &c.

Sometimes the consonant of the first syllable and the vowel of the second form a single syllable, the vowel of the first and the consonant of the second being elided. This is especially the case in writing the sounds of Chinese words, as *chiya* (チヤ) becomes *cha*, *shiya* (シヤ) *sha*, *chiyo* (チヨ) *cho*, *shiyo* (シヨ) *sho*, *jiyo* (ジヨ) *jo*, *kuwo* (クウ) *kō*, *chiyeu* (チエウ) *chō*, *shiyau* (シエウ) *shō*. Sometimes an entirely new sound is produced, as *teu* (テウ) *chō*, *heu* (ヘウ) *hyō*, *defu* (デフ) *jō*, *sefu* (セフ) *shō*, &c.

All these differences between speech and written or printed *kana* arising from the combination of certain syllables are exhibited in the following table:

Syllables in Combination.

イフ (ifu)..... <i>iu or yū</i>	リウ (riau)..... <i>ryō</i>	ラフ (rafu)..... <i>rō</i>	ザウ (xau)..... <i>xō</i>
イヒ (ihi)..... <i>ii</i>	リウ (riu)..... <i>ryū</i>	ウヘ (uhe)..... <i>ue</i>	ザフ (xafu)..... <i>xō</i>
イハ (iha)..... <i>iwa</i>	ヌフ (nufu)..... <i>nū</i>	ウイ (ui)..... <i>ui</i>	キウ (kiu)..... <i>kyū</i>
イヘ (ihe)..... <i>ie</i>	ヌウ (nuu)..... <i>nū</i>	ウハ (uha)..... <i>uwa</i>	キフ (kifu)..... <i>kyū</i>
ロウ (rou)..... <i>rō</i>	ヌヒ (nuhi)..... <i>nui</i>	ウヲ (uwo)..... <i>uwo</i>	キハ (kiha)..... <i>kiwa</i>
ハウ (hau)..... <i>hō</i>	チウ (wou)..... <i>ō</i>	ノウ (nou)..... <i>nō</i>	キヨウ (kiyou)..... <i>kyō</i>
ハフ (hafu)..... <i>hō</i>	チヒ (wohi)..... <i>oi</i>	ノホ (noho)..... <i>nō</i>	キヤウ (kiyau)..... <i>kyō</i>
ハヘ (hahe)..... <i>hae</i>	ワフ (wafu)..... <i>ō</i>	オフ (ofu)..... <i>ō</i>	キユ (kiyu)..... <i>kyu</i>
バウ (bau)..... <i>bō</i>	ワウ (wau)..... <i>ō</i>	オホ (oho)..... <i>ō</i>	キユウ (kiyuu)..... <i>kyū</i>
バフ (bafu)..... <i>bō</i>	カウ (kau)..... <i>kō</i>	オオ (oo)..... <i>ō</i>	ユウ (yuu)..... <i>yū</i>
ヘウ (heu)..... <i>hyō</i>	カフ (kafu)..... <i>kō</i>	オウ (ou)..... <i>ō</i>	ユフ (yufu)..... <i>yū</i>
ベウ (beu)..... <i>byō</i>	カヒ (kahi)..... <i>kai</i>	オヒ (ohi)..... <i>oi</i>	ユヒ (yuhi)..... <i>yui</i>
ホウ (hou)..... <i>hō</i>	カホ (kaho)..... <i>kao</i>	クハ (kuha)..... <i>kwa</i>	ミヤウ (miyau)..... <i>myō</i>
ホホ (hoho)..... <i>hō</i>	ガウ (gau)..... <i>gō</i>	クヒ (kuhi)..... <i>kui</i>	メウ (meu)..... <i>myō</i>
ボウ (bou)..... <i>bō</i>	ガフ (gafu)..... <i>gō</i>	クウ (kuu)..... <i>kū</i>	メヒ (mehi)..... <i>mei</i>
ニウ (niu)..... <i>nyū</i>	ヨウ (yofu)..... <i>yō</i>	グハ (guha)..... <i>gwa</i>	シヤ (shiya)..... <i>sha</i>
ニフ (nifu)..... <i>nyū</i>	ヨウ (you)..... <i>yō</i>	タウ (yau)..... <i>yō</i>	シヨ (shiyō)..... <i>shō</i>
ニホ (niho)..... <i>nyō</i>	ヨヒ (yohi)..... <i>yoi</i>	タフ (yafu)..... <i>yō</i>	シヤウ (shiyau)..... <i>shō</i>
ニヤウ (niyau)..... <i>nyō</i>	タウ (tau)..... <i>tō</i>	マウ (mau)..... <i>mō</i>	シヨフ (shiyofu)..... <i>shō</i>
ニヒ (nihi)..... <i>nii</i>	タフ (tafu)..... <i>tō</i>	マヒ (mahi)..... <i>mai</i>	シヨウ (shiyōu)..... <i>shō</i>
ニヘ (nihe)..... <i>nie</i>	タヘ (tahe)..... <i>tae</i>	マヘ (mahe)..... <i>mae</i>	シュー (shiu)..... <i>shū</i>
トフ (tofu)..... <i>tō</i>	タヒ (tahi)..... <i>tai</i>	ケウ (keu)..... <i>kyō</i>	シュ (shiyu)..... <i>shū</i>
トウ (tou)..... <i>tō</i>	ダウ (dau)..... <i>dō</i>	ケフ (kefu)..... <i>kyō</i>	シュウ (shiyuu)..... <i>shū</i>
トホ (toho)..... <i>tō</i>	レウ (reu)..... <i>ryō</i>	コウ (kou)..... <i>kō</i>	ジヤ (jiya)..... <i>ja</i>
トヲ (towo)..... <i>tō</i>	レフ (refu)..... <i>ryō</i>	コヒ (kōhi)..... <i>koī</i>	ジヨ (jiyo)..... <i>jo</i>
トヒ (tohi)..... <i>toi</i>	ソフ (sofu)..... <i>sō</i>	コフ (kofu)..... <i>kō</i>	ジヤウ (jiyau)..... <i>jō</i>
ドウ (dou)..... <i>dō</i>	ソウ (sou)..... <i>sō</i>	ゴウ (gou)..... <i>gō</i>	ジフ (jifu)..... <i>jū</i>
チヤ (chiya)..... <i>cha</i>	ソホ (soho)..... <i>sō</i>	ゴフ (gofu)..... <i>gō</i>	ジウ (jiu)..... <i>jū</i>
チヨ (chiyo)..... <i>cho</i>	ソヒ (sohi)..... <i>soi</i>	エウ (eu)..... <i>yō</i>	ジユ (jiyu)..... <i>jū</i>
チヤウ (chiyau)..... <i>chō</i>	ゾウ (xou)..... <i>xō</i>	テウ (teu)..... <i>chō</i>	モウ (mou)..... <i>mō</i>
チヨウ (chiyou)..... <i>chō</i>	ゾフ (xofu)..... <i>xō</i>	テフ (tefu)..... <i>chō</i>	モオ (moo)..... <i>mō</i>
チウ (chiu)..... <i>chū</i>	ツヒ (tsuhi)..... <i>tsui</i>	デウ (deu)..... <i>jō</i>	セウ (seu)..... <i>shō</i>
チエ (chiye)..... <i>chie</i>	ツウ (tsuu)..... <i>tsū</i>	デフ (defu)..... <i>jō</i>	セフ (sefu)..... <i>shō</i>
ジヨ (jiyo)..... <i>jō</i>	ネウ (neu)..... <i>nyō</i>	アウ (au)..... <i>ō or au</i>	セハ (seha)..... <i>sewa</i>
ジヤウ (jiyau)..... <i>jō</i>	ナウ (nau)..... <i>nō</i>	アフ (afu)..... <i>ō or au</i>	スヒ (sui)..... <i>sui</i>
ジユウ (jiyuu)..... <i>jū</i>	ナフ (nafu)..... <i>nō</i>	アヒ (ahi)..... <i>ai</i>	スフ (sufu)..... <i>sū</i>
リフ (rifu)..... <i>ryū</i>	ナホ (naho)..... <i>nāo</i>	アハ (aha)..... <i>awa</i>	スハ (suha)..... <i>suwa</i>
リヨ (riyo)..... <i>ryo</i>	ナヘ (nahe)..... <i>nae</i>	サウ (sau)..... <i>sō</i>	ホフ (hofu)..... <i>hō</i>
リヨウ (riyou)..... <i>ryō</i>	ラウ (rau)..... <i>rō</i>	サフ (safu)..... <i>sō</i>	

The macron (over the *o* and *u*) is retained in this table, but its omission in geographic names is recommended.

The introduction of the Romaji-Kwai system changes the English orthography of many Japanese names, and, as Japanese charts of older date have frequently to be consulted in the compilation of new charts or sailing directions, certain changes from the old form of English spelling are here noted :

In the Romaji-Kwai system the *y* is omitted before *e*, and names formerly commencing with *y* now begin with *e*; thus, Yezo is now Ezo (also called Hokkaido), Yenoura is now Enoura, &c. The *y* is also omitted in the body of purely Japanese words, and such names as were formerly written Kohiye, Inuboye, &c., are now written Kohie, Inuboe, &c.

Dzu is now written zu, as Kisarazu for Kisaradzu, Banzu for Bandzu, &c. The syllable *tsu* (ツ) when preceding the strong consonants *k*, *s*, *p* and *t* is often elided and the consonant of the syllable following it doubled, as Nippon for Nitsupon, Akkeshi for Atsukeshi, &c.

Ku (ク) when followed by a syllable beginning with *k* loses its vowel, as bakuka becomes bakka, bikuko becomes bikko, koku-ka becomes kokka, &c.

The vowels *i* and *u* are often feebly sounded, as, hito is pronounced h'to; shichi=sh'chi, shita=sh'ta, shite=sh'te, futatsu=f'tatsu, futo=f'to, &c.

(The preceding notes on the system of pronunciation and on syllables in combination, with the exception of some changes and additions, have mainly been taken from Hepburn's Dictionary.)

THE HYPHEN.

In regard to the use of the hyphen in Japanese geographic names, we find that on charts lately published by the Hydrographic Office at Tokyo it is rarely employed and but little attention seems to be paid to its systematic application. Instead, with few exceptions, the syllables composing a proper name are written together in one word on these charts. In Whitney's Dictionary the hyphen appears to have been consistently applied, but, since comparatively few of the names occurring on nautical charts and in Notices to Mariners, &c., can be found in that book, we have come to the conclusion that in Japanese geographic names the hyphen is not a necessity and that for the sake of consistency it will be preferable to omit it altogether.

THE MACRON.

To avoid the application of diacritical marks in geographic names as far as possible, and in conformity with our general rule "that doubling of a vowel is only necessary where there is a *distinct* repetition of the single sound," we have concluded to recommend the omission of the

macron on the long o and long u, believing that the gain in simplicity of spelling more than balances the loss in correct pronunciation.

RECOMMENDATIONS.

After a thorough consideration of all the information obtained by the Board, on the orthography, &c., of Japanese geographic names, we have agreed upon the following recommendations:

1. The geographic names found on the charts and in the sailing directions issued by the Hydrographic Office at Tokyo should be accepted as the Japanese official names.

2. The transliteration of these Japanese official names should be in conformity with the phonetic values assigned to the Japanese syllabary, or Go-ju-on, in the Romaji-Kwai system, and in conformity with the changes to which syllables in combination are subject, as shown on the preceding pages, with the proviso that the macron on the vowels o and u be not retained.

In regard to the Chinese ideographs occurring in Japanese publications, they should be transliterated in accordance with their equivalents in Japanese kana and for which the Chinese and Japanese dictionary mentioned on a preceding page of this report should be used as an auxiliary standard.

3. W. N. Whitney's "Concise Dictionary of the Principal Roads, Chief Towns and Villages of Japan" should also be accepted as an auxiliary standard authority for all names found in it, with the proviso that in the names taken from it the hyphen and macron be omitted.

4. J. C. Hepburn's Japanese-English and English-Japanese Dictionary, fourth edition, unabridged, should be adopted as a standard authority by this Office.

5. The names found transliterated in Roman character on the charts published by the Hydrographic Office at Tokyo, especially those of earlier issues, not being always found in accordance with the Romaji-Kwai system, should be closely scrutinized for any syllables not occurring in the "Syllabary" or in "Syllables in Combination."

To illustrate: On the over-lapping portions of Japanese charts Nos. 183 and 196 we find on one the names Manziu Shima and Kanziu Shima; on the other, for the same islets, the names Manju Shima and Kanju Shima. According to Hepburn's Dictionary, page 377, the word manjū (マヅ) means a kind of round cake, and in connection with ishi, a nodule of stone.

The Japanese syllables given above, if transliterated according to the syllabary, would give Manzū, but by turning to the table of "Syllables in Combination" we find that the compound (マヅ) takes the form jū,

hence the correct spelling, as we propose to omit the macron over o and u, is Manju Shima, not Manziu Shima. In the other case (Kanziu) we see already from the similarity of the middle characters in the two names that the syllables in Japanese are also alike, hence the proper spelling is Kanju, not Kanziu.

GENERIC NAMES.

6. Japanese generic names form also frequently part of a proper name, similarly as in our Newport, for instance, so in the Japanese Nagasaki (Long point).

In regard to the names for bay, harbor, point, island, &c., it is proposed to retain the Japanese names for these, except in those comparatively few cases where the translated form in connection with a proper name has become perfectly familiar, like Gulf of Tokyo, Yokohama Bay, Nagasaki Harbor and a few others.

KOREAN.

Although the Koreans have an alphabet of their own, the annals of their kingdom, their laws, scientific books, &c., and the geographic names on their maps are, as a rule, written or printed in Chinese characters. The Koreans themselves not having made any hydrographic surveys, existing nautical charts of their country are based on English, French, Russian, Japanese, and, in a few isolated points, on United States surveys. The nomenclature on these maps is often greatly at variance and many of the islands, points and anchorages were, until a comparatively recent time, known to us only by the names bestowed on them by European explorers and surveyors, and even to-day we do not know the native names of quite a number of them.

In the investigation of Korean geographic nomenclature, the Board has been very materially aided by Ensign John B. Bernadou, U. S. N., who in a letter to this Board (see appendix) kindly answered a series of questions submitted to him and through whose courtesy the Board was supplied with the following authorities on the subject:

1. A genuine Korean map of Korea.
2. A French-Korean dictionary with an appendix of geographic names, published in 1880.
3. A list of Korean geographical names, published in 1884, by E. M. Satow, H. B. M. Agent and Consul General in Siam.

Dr. Satow's list forms an index to the map of Korea published in 1883 in Petermann's Mittheilungen, and is principally based on a map published in 1875 by the Japanese War Department at Tokyo. From this Japanese map Dr. Satow transliterated the geographic names according to a phonetic system which we find to be nearly in harmony with

our general phonetic rules; that is, the vowels have their continental sounds and the consonants their English sounds, subject, however, to the remarks in the "System of Pronunciation" given further on.

A comparison of the French with Dr. Satow's transliteration shows the following differences in the equivalents of the Korean vowels:

KOREAN.	FRENCH.	DR. SATOW	KOREAN.	FRENCH.	DR. SATOW
ㅏ	a	a	ㅗ	yo	yo*
ㅓ	ā	a	ㅜ ^(†)	ou ⁽¹⁾	u
ㅑ	ya	ya*	ㅠ	you ⁽²⁾	yu*
ㅕ	e	ō	ㅣ	i	i
ㅛ	ye	yō*	ㅟ ^(†)	eu ⁽³⁾	eu
ㅜ ^(†)	o	o			

* In the equivalents *ya*, *yō*, *yo*, whenever in Korean the *y* is not pronounced it is in Dr. Satow's transliteration omitted.

(†) As consonants ㅜ and ㅟ are equivalent to *w*.

(1) Changes to *u* in the new French system.

(2) Changes to *yu* in the new French system.

(3) Changes to *æ* in the new French system.

Dr. Satow adds to this the following list of diphthongs:

ㅑ..... ai	ㅟ ⁽¹⁾ ui or wi	ㅟ..... wō
ㅓ..... ai	ㅟ ⁽²⁾ oi or wi	ㅑ..... wai
ㅑ..... yai*	ㅓ..... wi	ㅑ..... wé
ㅕ..... é	ㅟ..... wa	
ㅛ..... yé*	ㅠ..... yui*	

* *y* is omitted in Dr. Satow's transliteration when not pronounced.

(1) According as ㅟ is a vowel or a consonant.

(2) According as ㅟ is a vowel or a consonant.

CONSONANTS.

ㅈ ... ch or j	ㅊ ⁽⁴⁾ ... th	ㄱ ⁽⁶⁾ ... l
ㅋ ⁽¹⁾ ... k or g	ㅌ ... ph	ㅍ ⁽⁷⁾ ... s
ㄷ ⁽²⁾ ... t or d	ㅊ ... chh	ㅇ ... h
ㅍ ⁽³⁾ ... p or b	ㅁ ... m	ㅇ ... final ng
ㅋ ... kh	ㄴ ⁽⁵⁾ ... n	

(1) Before *m*, *n* or *r* it changes to *ng*.

(2) Before *i* and *y* it changes to *ch*.

(3) Before *r* or *n* it changes to *m*.

(4) Before *i* and *y* it changes to *ch*.

(5) At the beginning of an initial syllable *n* is dropped before *i* or *y*, but revives when such syllable becomes the second (or succeeding) member of a compound. When followed or preceded by ㄱ (l), it is written l, but before *y* the second l is dropped. Reduplicated *n* may be pronounced either *nn* or *ll*, but usually *ll*. Between two vowels *n* becomes *r*.

(6) This letter is *l* when final or doubled by assimilation with another letter; between two vowels it becomes *r*; after consonants in Chinese words, it changes to *n*; before *a*, *o*, *u* or *e* in an initial syllable, and before *i*, *y* and *é* at the beginning of an initial syllable, it is dropped, but revives when such syllable becomes the second (or succeeding) member of a compound.

(7) This letter, when final, becomes *t*. When used as a mark of reduplication at the beginning of a word, the reduplicated letter is written twice; thus ㄱㄱ is written *kk*. ㅍ used for the same purpose is represented in the same way.

These somewhat complicated rules of letter change are a peculiarity of the Korean language, and special attention must be paid to them in transliterating.

SYSTEM OF PRONUNCIATION.

In regard to the pronunciation of the vowels, Dr. Satow remarks : *ai* is pronounced like English *a* in hat or hare ; *care* must be taken not to confound it with *a*, which has the usual continental sound.

é is pronounced like French *é*.

eu stands for a close compressed vowel unknown to the languages of Western Europe. The English so-called "neutral vowel" *u*, however, is a little like it.

ö in most words coincides with the German ö (œ), but not infrequently approximates to French é.

kh, *ph*, *th* and *chh* represent apirated *k*, *p*, *t* and *ch*, as in the English words inkhorn, topheavy, lanthorn, watch-house.

kk, *pp*, &c., are *k*, *p*, &c., pronounced in a sharp, dry manner only to be learned from a native.

s often approximates in sound to *sh*.

The Korean ear does not appreciate the difference between a word commencing with *i* or *y* and one commencing with either of these vowels preceded by *n* or *r*. Generally, however, an original *n* or *r* is omitted at the beginning of an initial, and revives at the beginning of a medial syllable before *i* or *y*.

The differences in transliteration between the French and Dr. Satow's system are clearly exemplified in the following names :

Appendix to French-Korean dictionary.	Dr. Satow's list of Korean geographic names.
Yang-syeng.....	Yang-söng.
An-ouen.....	An-wön.
An-eul.....	An-wi.
An-hyep.....	An-hyöp.
An-tjyou.....	An-ju.
Syo-paik-san.....	So-paik-san.
Syou-ouen.....	Su-wön.
Koang Tjyou.....	Kwang-ju.
Kou-ryei.....	Ku-ré.
Tai-tong-kang.....	Tai-dong-gang.
An-hueng.....	An-hueng.
Yang-Keung.....	Yang-Keung.

RECOMMENDATIONS.

In the present state of our knowledge of Korean geographic names, we do not consider it advisable to originate a new system of transliteration, and we therefore recommend the adoption by this Office of the orthography of all names found in Dr. Satow's list, the only deviation we propose being the omission of the diacritical signs and of the hyphen between the words composing a name, a proposition which is in accord with our general aim to do away with all not strictly necessary marks in geographic names.

Our preference for Dr. Satow's system of transliteration is influenced by the consideration that, as we can only hope to reach an approximation to the true Korean sound, the deviations from the correct sound, of the diphthongs, for instance, would probably appear equally or even stronger in any other system that could be proposed.

Korean names not represented in Dr. Satow's list but which may be found on nautical or other charts, or in sailing directions, can, in many cases, be corrected in their spelling, where it appears doubtful, by an intelligent comparison of the syllables composing the names of the list.

The Japanese having since 1875 acquired the right to survey Korean coasts, the charts published by them of that country will contain many new Korean names in Chinese character. It will, in most cases, be possible for those unacquainted with Chinese to decipher the syllables composing such names, by patiently comparing the Chinese characters in Dr. Satow's list with those on the Japanese charts.

KOREAN GENERIC NAMES.

In regard to Korean generic names we recommend that they be retained in the Hydrographic Office publications in their native sounds, a list of them with their meaning translated into English to be placed on charts and in sailing directions.

The more frequently occurring generic names are the following :

do	province. also island.
kot	promontory, cape.
san	mount.
pong	peak.
hyŏn	hill.
sŏng	fort.
sansŏng	mountain fortress.
sa	Buddhist temple. monastery.
hai	sea.
ti	lake.
pho, kai	anchorage. harbor, bay.
gang	river.

Comparative table of sound equivalents adopted for the transliteration of geographic names by the British, French, German and Spanish Hydrographic Offices, together with those proposed by the United States Hydrographic Office.

United States.	British.	French.	German.	Spanish.
a—as in father.....	a.....	a.....	a..... â.	a.
e—as in benefit.....	e.....	e.....	e.....	e.
i—as in ravine.....	i.....	i.....	i.....	i.
o—as in mote.....	o.....	o.....	o.....	o.
u—as in flute.....	u.....	u.....	u..... ä or ae.	u.
ö—nearly as German ö or French œ.....	.....	œ.....	ö or oe.....	œ.
ü—like German and French ü.....	.....	ü.....	ü or ue.....	ü.
ai—as i in ice.....	ai.....	.....	ai.	.....
au—as ow in how.....	au.....	.....	au.	.....
ao—as in Nanao.....	ao.....	.....	ao.	.....
ei—nearly as in they.....	ei.....	.....	ei, as i in mine.	.....
b—English b.....	b.....	b.....	b.....	b.
c—always soft, as in center.....	c.....	c.....	c.....	c, also z.
ch—as in church.....	ch.....	ch or ch.....	ch.....	ch.
d—English d.....	d.....	d.....	d.....	d.
f—English f.....	f.....	f.....	f.....	f.
g—always hard.....	g.....	g.....	g.....	g, hard before a, o, u, ue and ui.
h—always pronounced when inserted.....	h.....	h.....	h.....	h.
j—English j.....	j.....	dj or j.....	j.....	y, consonantal.
k—English k; also replaces hard c.....	k.....	k.....	k.....	k, also qu.
kh—Oriental guttural, as in Khan.....	kh.....	kh.....	kh.....	j.
gh—Oriental guttural, as in Ghazi.....	gh.....	gh.....	gh.....	j.
l—English l.....	l.....	l.....	l.....	l.
m—English m.....	m.....	m.....	m.....	m.
n—English n.....	n.....	n.....	n.....	n.
ng—as in finger and singer.....	ng.....	.....	.....	.....
p—English p.....	p.....	p.....	p.....	p.
ph—as in loop-hole: not to be used for f.	.....	.....	.....	.....
kw—replaces qu.....	kw.....	qu.....	k, also ku.....	qu.
r—English r.....	r.....	r.....	r.....	r.
s—English s.....	s.....	s.....	s.....	s.
sh—as in shelf.....	sh.....	sh.....	sh.....	sh.
t—English t.....	t.....	t.....	t.....	t.
v—English v.....	v.....	v.....	v.....	v.
w—English w.....	w.....	w.....	w.....	w.
x—English x.....	x.....	x.....	x.....	x.
y—always consonantal, as in yard.....	y.....	y.....	y, also j.....	y.
z—English z.....	z.....	z.....	z.....	z'.

MALAY.

This language prevails over an extensive portion of the East India archipelago, including the Malay peninsula, the large islands of Sumatra, Borneo, Célebes, the Philippines and Molukkas, and the islands of the south from Java to Timor Laut. Although most of these islands have each their own peculiar language (Javanese on Java, Batak on Sumatra, Dayak on Borneo, Makassar and Bugis on Célebes, Tagala and Bisayan on the Philippines, &c.), Malayan is spoken along the coasts, and at the mouths and banks of navigable rivers of all of them, and it forms the medium of commercial and foreign intercourse to such an extent that it has not inaptly been termed the "lingua franca" of the East.

In regard to transliterating Malay in Roman character, Maxwell, in the preface to his grammar, published in 1882, remarks that the spelling of Malay words in the native character is hardly yet fixed, though the Perso-Arabic alphabet has been in use since the 13th century, and that those follow but a vain shadow who seek to prescribe exact modes of spelling words regarding which native authorities are not agreed and of which the pronunciation may vary according to locality.

For this reason the transcription of the living sound rather than that of the native writing is preferable as the basis for the spelling in Roman character. A table of English-Malay letter equivalents would therefore be useless also for the additional reason that in practice the Hydrographic Office does not become acquainted with the native writing of Malay names.

Knowledge of the nomenclature along the coasts of this vast archipelago has come to us principally through British, Dutch and Spanish surveyors, and, as they have rendered the orthography of geographic names after a system peculiar to each, it is clear that to enable one not familiar with the language to write Malayan geographic names in accordance with a uniform phonetic system it is important to know the original source for the orthography in Roman character, whether English, Dutch or Spanish.

ENGLISH-MALAY.

In regard to Malayan names transmitted to us by British surveyors, no further directions can be given than that the latest rendering of a name should be ascertained and reviewed in order to detect whether it requires alteration to bring it in accord with the general phonetic system proposed for adoption by this Office.

When making use of British Admiralty charts of earlier date of publication than 1885, the names, if they can not be verified from later sources, require particular scrutiny, because these charts are now, as far as nomenclature is concerned, in a state of transition from the old to the new system; that is to say, certain parts of a chart may have received a number of corrections since 1885, including some names, while other parts are left undisturbed, because it is a manifest impossibility for the British to bring the nomenclature on all their charts at once in accord with their new system.

DUTCH-MALAY.

We have re-examined the system of spelling Dutch-Malay names, published in Notice to Mariners, No. 11 of 1889, section 233, and beg to report as follows:

To an inquiry from this Office in regard to the system of orthography adopted on the charts published by the Hydrographic Office at Batavia, the Hydrographer of Netherlands India, Mr. Edeling, under date of October 22, 1888, sent a reply from which we extract the following:

“With reference to your letter of July 27, 1888, I have the honor to inform you that Malayan names in use at this office are written with the Dutch alphabet with the usual pronunciation, except the letter ‘g,’ which is pronounced as in the English word ‘gold,’ while, for instance, *ng* at the end of the word *Pandang* has a sound as in the English word ‘long.’

“When translating, the pronunciation of the word must be known, as the Arabian characters are not used for the vowels, and the Malayan words *Cintang*, *Centing*, *Coenting*, *Conteng*, &c., are all written in the same way.”

We have also examined the British system of transcribing Malay names from Batavian charts, which the Hydrographer of the Admiralty, Captain W. J. L. Wharton, R. N., kindly enclosed in his answer of April 14, 1890, to the Hydrographic Office circular-letter for information on geographic nomenclature.

The British system of equivalents is as follows:

Dutch.	English.
Dj.....	j.
Tj.....	Ch.
Oe.....	u.
Ij.....	ai (generally).
j (in middle of word).....	y (if followed by the Dutch oe).
Ou.....	u.
Oo.....	u.

All pure Dutch words to stand, viz: *hoek* (point), not *huk*.

We find that the rules in the Notice to Mariners referred to above are consistent with the information in Mr. Edeling's letter, and that they are also in general agreement with the British system, but that the latter contains some additional points which should be taken notice of in our system. We have, therefore, prepared amended rules for guidance in the transcription of Dutch-Malay names.

In explanation of the amendments to our former rules, and of the slight deviations from the British system, we beg to submit the following remarks:

The British system apparently qualifies the substitution of the letter y for j only when it is in the middle of a word, and when it is followed by the Dutch vowel *oe* (English *u*), but is silent on the treatment of j when followed by any other vowel than *oe*, and it also substitutes (generally) *ai* for *ij*.

In regard to the first of these points, we have re-examined the phonetic value of the Dutch letter j and could find no reason to change our original rule, since in writing, for example, *Tamuyang* instead of *Tamujang*, as by the British system, we believe to give the more accurate pronunciation, and it is clear that if *Tamujang* would represent the correct pronunciation this name would appear on late Batavian charts as *Tamoedjang* and not as *Tamoejang*.

Further, in the vocabularies of Marsden and Maxwell, and also on English charts, a number of Malayan names are found in which the y is followed by vowels other than u, as in Gayong, Sayap, Buayan, &c., which, according to the system of transcription now in vogue at Batavia, could not well be written differently by the Dutch than Gajong, Sajap, Boeajan, &c.

In the earlier Batavian publications, however, we find a good deal of inconsistency in the use of the letter j, which may have influenced the framing of the British Admiralty rule referring to j. As regards the second point: The sound of the Dutch *ij* is equivalent to that of the Dutch diphthong *ei*, which in English is correctly enough represented by *ai*, but we find *ij* is no longer employed in late Batavian publications to express this sound in Malayan names, *ei* or *ai* being substituted. Similarly the sound of the English u will not be found expressed in the later Batavian publications by *oo* or *ou*, but always by *oe*. We have, however, incorporated the letters *ij*, *oo* and *ou* in our system to cover cases found in earlier Batavian authorities and in order to harmonize as far as possible with the British rules.

In regard to the Dutch *ie*, the long sound of *i* (English *ee* as in *been*), we find that in the latest Batavian guides the *e* mute is no longer retained

in Malay names, so that, for instance, the names written by the Dutch a few years ago *Toboalie*, *Bienga*, *Bagienda*, *Kalie*, &c., are now rendered by them *Toboali*, *Binga*, *Baginda*, *Kali*, &c. For this reason we have extended the old rule referring to *ie* at the end of names, so as to cover the cases where this sound appears in the middle of a name.

Amended system of transcription of Dutch-Malay names.

Dutch-Malay.	English equivalent.	Remarks.
Dj	j	as Panjang for Pandjang, Jati for Djati.
Tj	ch	as Kechil for Ketjil, Chipanchur for Tjipantjoer.
ij	y	when not preceded by t, d or i. as Payung for Pajoeng, Tamuyang for Tamoejang.
ij	ai or ei	(in the later Batavian publications ij is no longer employed in Dutch-Malay names, ai or ei being substituted).
oe, oo, ou	u	as Sumur for Soemoer, Batu for Batoe.
ie	i	as Binga for Bienga, Mandiri for Mandirie.

The orthography of pure Dutch names, as Boompjes, &c., will not be changed. In every case the latest Batavian rendering of a name should be ascertained and older Batavian authorities must not be relied on for correct spelling, as they show many differences from the more recent Batavian charts and sailing directions.

GEOGRAPHIC NOMENCLATURE IN THE PHILIPPINES.

On account of differences in the phonetic values between several letters of the Spanish, Dutch and English alphabets, the nomenclature in the Philippines transmitted to us by Spanish explorers and surveyors needs a somewhat different treatment to that applied to Dutch-Malay names, in order to harmonize with our general system of orthography. Convinced, however, of the desirability of lessening as far as possible differences from the nomenclature by the official Spanish authorities, we have confined the rules we propose to those letters and combinations of letters which most affect the English pronunciation.

The Spaniards have supplied quite a number of genuine Spanish names in the Philippines and neighboring islands, and they have also, we might almost say, imparted by their orthography to many native names a somewhat Spanish tinge, so that care must be exercised to separate them from Spanish names, as the native names alone are amenable to the rules which we propose for adoption.

We have not thought it advisable to represent the sound of the Spanish *j*, for which we have no exact equivalent in English, by either *kh*, *gh*, or *h* alone, as these substitutes are about as far from the correct sound as that of the English *j*.

The letters qu, which in English and German have the sound of kw, are in Spanish distinctly sounded k, and the Spanish qu has therefore been represented in our rule by k and not by kw.

In framing our rules we necessarily had to assume that the Spaniards have written native names as accurately as their phonetic system would permit. If they were not so written, all our efforts to systematize the orthography would be futile, since we can not write after the sound from a native, but must deal with a name as put down by the Spaniards.

Transcription of Native names in the Philippines.

[Under the old Spanish system.]

Spanish letter.	English equivalent.	Remarks.
c.....	s.....	before e, i or y; as <i>Pasijan</i> for Pacijan. (The soft c occurs very rarely.)
c.....	k.....	before a, o, u, and before all consonants except h. Also when at the beginning or end of a name, as <i>Bukod</i> for Bucod; <i>Akdan</i> for Acdan; <i>Kabuk</i> for Cabuc.
ch.....	ch.....	as in Acha, Dichilem.
ge, gi.....	je, ji.....	as <i>Pinget</i> for Pinget; <i>Jinamok</i> for Ginamoc.
gue, gui.....	ge, gi.....	as <i>Balangingi</i> for Balanguingui.
güe, güi.....	gue, gui.....	as <i>Banguei</i> for Bangiley.
oo.....	u.....	as <i>Kampukan</i> for Campoocan.
Qu.....	k.....	as <i>Kipit</i> for Quipit.
y.....	i.....	at the end of a name, or in the middle of a name when followed by a consonant, as <i>Tunai</i> for Tanay; <i>Tuibayu</i> for Taybayu.
y.....	y.....	at the beginning of a name or when between two vowels, as <i>Yapusan</i> <i>Balayau</i> .

The best authorities for the nomenclature of the Philippines are—

Derrotero del Archipelago Filipino, published 1879.

Diccionario Geografico de las Islas Filipinas, por Buceta y Brava, 1850.

CHINESE.

Of all existing languages, Chinese is spoken by the greatest number of people, and in consequence of the political domination and influence of China over neighboring states, it has become the medium of intercourse among the educated eastern Asiatic nations generally. Of the many dialects prevailing in China, the most important one is the Kwan hwa, or Mandarin dialect, which is the official and literary language of the whole empire, and of the educated Chinese in any part of it. Of the other dialects, obtaining mainly in the southeastern provinces, the more prominent ones are the Canton, Swatau, Amoy and Fuchau, and some minor varieties, all so different from one another that the use of any one of them will render the speaker quite unintelligible to dwellers in other parts of the empire. The language is monosyllabic, every syllable being a root and every root a word; it is without inflection or agglutination, and the words are employed indifferently as one and another part of speech; that is to say, the same word may form substantive, adjective, verb or adverb; and the relation of gender, case, number and person is determined by the position of the word in the sentence, and by the use of certain auxiliary words. As the language possesses no alphabet, the Chinese require a different symbol for each meaning. All Chinese symbols can be divided into two main classes, viz, radicals and combinations, the latter being formed by the addition of strokes to the radical. Native philologists, however, divide the symbols into six classes, of which the first represents the forms of objects numbering 600 or more, and which include the 214 radicals which form the basis of every symbol in the language. The second class indicates things that represent ideas to the mind by their relative positions. The third class of symbols, of which there are said to be about 700, represents the combination of ideas, and they are formed by uniting two or more significant characters to give the idea of a third. The fourth class numbers about 372, and comprises symbols, which, being inverted either in form or sound, assume different meanings. The fifth class consists of about 600 symbols which represent borrowed meanings; that is to say, they are applied in a double sense, and hence have been called metaphorical. The sixth class embraces over 20,000 characters, each being composed of two parts, viz: the primitive or phonetic element, which represents a certain sound and which also gives the sound to the whole character, and one of the 214 radicals from the first class. According to some writers the whole number of symbols is over 40,000, of which, after deducting the obsolete ones, about 25,000 are reckoned to be in modern use.

This vast number of symbols is expressed by only 400 or 500 syllabic sounds, which, by way of different intonation, are increased to about 1,500, or, according to some authorities, to only about 1,200. This peculiar state of affairs makes the language the richest in the number of written symbols but the poorest in the number of different sounds by which these symbols are expressed in the living speech; and since the same sound may represent sixty or more different words, the Chinese, to overcome this difficulty, fix the proper meaning by combining the word, which it is desirable to make understood, with another bearing a similar or supplementary meaning, and by placing, in the case of nouns, classifying words between them and the numerals which precede them.

We give this necessarily short and crude sketch of the language with a view to indicate the almost insurmountable difficulties which the paucity of sounds presents to the correct transliteration of Chinese into Roman character, a difficulty that can only be partially overcome by distinguishing the different meanings of a word represented by the same sound, by the numerous applications of diacritical signs, in imitation of Lepsius and others; a process which, however, easily leads to confusion and which it is not desirable to apply to geographic names.

In answer to its circular letter of inquiry, the Hydrographic Office received two very interesting communications from China, one from Captain A. M. Bisbee, Coast Inspector of the Chinese Imperial Customs Service, at Shanghai, and the other from Mr. E. B. Drew, Chief Secretary to the Inspector General of Customs, at Peking, by direction of Sir Robert Hart, Inspector General of the Imperial Chinese Customs, both of which letters will be found in the Appendix to this report. From Captain Bisbee's letter we learn that the Customs Service generally adopts the popular spelling, and that the popular spelling is the transliteration of the local sounds of the characters by which the place is known to Chinese. Thus, Pakhoi is the local and Cantonese sound of the name of that place, while in the Mandarin pronunciation it is Peihai. Similarly, Hoihow (Hoihow) is the Cantonese, and Hoikou the Mandarin pronunciation of the name of that seaport, and Captain Bisbee argues that, as the native merchants of Hongkong, who are the chief traders of the place, and are Cantonese, gave the sound Hoihow to it in the mercantile world of Hongkong, it would be useless for any one to employ a different sound, and he concludes that, where commerce takes hold of any way of transliterating any particular name, geographers, in order to be understood, should follow the lead thus given.

The Inspector General approves the remarks of Captain Bisbee, as being a practical statement of facts as they are, but expresses the hope

that in the course of time a uniform and universal system may be agreed upon and adopted by the civilized world. From the memorandum accompanying this letter, we are informed that the systems of transliteration most in favor are those of Sir Thomas Wade and Dr. S. Wells Williams, the former being usually preferred for the transliteration of the sounds of the Mandarin dialect, but that for geographic nomenclature, this system would probably be found inadequate for the local sounds of places along the coast between Shanghai and the Tongking frontier, where the Mandarin dialect is not in use at all.

With regard to Dr. Williams' system, we are informed that the spelling already given on existing well-known maps is not so far removed from it as Sir Thomas Wade's spelling. In other words, the spelling on existing standard maps would not have to be radically changed, in order to conform to Dr. Williams' system, as would be necessary were Sir Thomas Wade's system adopted, because the former provides for transliterating the dialects of the east and southeast maritime provinces, which the latter does not. We are further informed that chartmakers and surveyors of the coast line from Shanghai to the Tongking frontier would find in Williams, ready to their hands, a fixed and uniform system for rendering in Roman letters the names by which rocks, bays, islands, towns, &c., are called by the natives on the spot.

For want of necessary material the Board has not, as yet, had an opportunity to study either Wade's or Williams' system, and is not, therefore, prepared to recommend fixed rules for transliteration. But we express the hope that the time is near at hand when the Hydrographic Office will be enabled to originate a system of transliteration of the geographic names of China directly from the symbols representing them. Until then, we must content ourselves in giving some simple points in addition to our rules, that will, to some extent, serve as a guide for the spelling in Roman character of Chinese sounds or their approximations as they occur in geographic names, without trying to fix the different intonations, and leaving the meanings of the words a secondary consideration, except in so far as they relate to generic names.

The letters and combinations of letters occurring in the spelling of names in the Kwan hwa and other dialects are:

- (1) The vowels, a, e, i, o, u, ü, and the semi-vowel y.
- (2) The vowel combinations ai, ao, au, ei, eu and eü, each vowel being pronounced separately.
- (3) The nasal endings an, en, in, ün, ang, eng, ing and ung.
- (4) The single consonants f, h, j, k, l, m, n, p, s, t, w and z; the letters b, d, r, v and x not occurring at all, and g only in the nasal endings as ng.

(5) The consonantal combinations *ch, hs, hw, kh, kw* (*w* being pronounced nearly as *u*), *lw, mw, ng, nw, pw, sh, shw, sw, sz, ts, tsw, tsz, tw* and *tz*. The single letters *c* and *q* are debarred from use by the general rules.

In the changes which old forms of names have to undergo in order to come into accord with the new general system of spelling, the more noteworthy ones are those with the syllables ending in *ow*, as *Ting-chow, Hwang-chow, Kwang-chow, &c.*, which should be spelled *Tingchau, Hwangchau, Kwangchau, &c.*; also the syllables containing *oo*, for which we now substitute *u*, as *Fuchau* for *Foochow*; *Nanchangfu* for *Nanchang-foo*; *Suchau* for *Soo-chow, &c.* Another point that needs looking into is the phonetic value of the vowels *a, e* and *i*. In old forms of names these frequently represent their English sound instead of having their sound expressed by the Italian vowels of the new system. Thus, when one finds on an English map the name *Wan-chow*, and on the maps of continental nations the same name as *Wen-chow* or *Wen-tseu*, there is strong reason to conclude that the spelling, in accordance with the new system, should be *Wenchau* and not *Wanchau*.

The difficulty with changing names in this manner is, however, that when we are not acquainted with their actual sounds, and simply rely on the old form of a name for the change, we are liable to commit new errors. Until a fixed system of transliterating Chinese can be established, we would recommend :

(1) That the Hydrographic Office adopt the spelling of all geographic names found in the latest publications of the Chinese Imperial Customs service, and in the list of "Names of Places on the China Coast and the Yangtze River," published by order of the Inspector General of Customs in 1882, subject only to such modifications as are demanded by our general system as illustrated above.

(2) That any names not occurring in these publications, but which may be found in "Playfair's Cities and Towns of China," shall be considered the next best authority, subject, however, to the modifications which will bring the spelling in accord with the general system.

(3) Names not to be found in either of these publications, but which appear on British Admiralty charts and in British Admiralty sailing directions, shall be spelled as in the latest issues of such publications, subject also to modifications where the spelling appears to be in conflict with the general system.

THE HYPHEN.

The practice of employing a hyphen to indicate separation of syllables is found to greatly vary by different authorities, some retaining it throughout, others observing a mixed practice by applying it in a number of words only, while still others dispense with it altogether. Thus we find the spelling of Hong-Kong, Hong Kong and Hongkong; Kwang-tung, Kwang tung and Kwangtung; Chi-fu, Chifu, Chee-foo and Cheefoo, &c. From the "Memorandum on the Chinese Customs Method of Printing Chinese Names of Places," Shanghai, January, 1891 (see Appendix), we are informed that, generally, in names spelled according to Wade's system, a hyphen separates the sounds of the different characters, while, when any other system is used, the hyphen is omitted and the name is printed as one word. We are strongly in favor of uniformly omitting hyphen and aspirates in writing geographic names and of compounding the syllables of a proper name into one word, as in Hongkong, Haifong, &c.; but in cases where a generic name is connected with a proper name, without forming an integral part of it, we would add the former separated from the latter, as in Pei ho, Han kiang, &c.

Even in those very rare and somewhat doubtful cases of names, in which the sound of a following syllable begins with *ng*, there appears no real necessity for a separation, since, as has been pointed out before, the sound of *g* is unknown to the Chinese, except as it appears in the nasal *ng*. So that, for instance, if we write Chinngan there could be no doubt that it should be pronounced Chin-ngan and not Chinn-gan.

Many of the generic names appear as the integral parts in the names of provinces, cities, mountains, waters, &c., and thus form, to a certain extent, a guide for their orthography. Thus the name Hunan is composed of *hu* (lake), and *nan* (south), the whole meaning the province south of the lake. Similarly in Shantung, from *shan* (mountain), and *tung* (east), the whole meaning the province east of the mountain; Chu kiang, *chu* (pearl), *kiang* (river); Peyu shan, *pe*. (white), *yu* (precious stone), *shan* (mountain), &c.

It will be seen from this that the compilation of copious lists containing the correctly transliterated generic names that enter into the composition of the geographic names of China, is of great importance.

(For the short sketch of the language, the article on Chinese in the Encyclopedia Britannica, 9th ed.; Ewald, in Petermann's Mittheilungen, and a few other authorities have been consulted.)

SPANISH ORTHOGRAPHY.

NOTES ON CHANGES.

Since the beginning of the present century, Spanish orthography has undergone various changes that affect the spelling of many geographic names, and that should be understood in order to be able to distinguish between obsolete and modern forms. These changes particularly affect Spanish-American names often to be found in earlier geographical and nautical publications, which, for want of better data, may have to be used in the compilation of charts and sailing directions. The more important of these changes are:

1. The letter *ç* before the vowels *a*, *o* and *u* has been replaced by *z*; as *Zaragoza* for *Zaragoça*.

2. The letter *z* before the vowels *e* and *i* has, with very few exceptions, been replaced by *c*; as *Cerro* for *Zerro*.

3. The letter *k* is no longer retained. Some Spaniards still write a few words with *k*, but the Spanish Academy has substituted *c* and *qu* for that letter. The rule is as follows: "*The sound k before the vowels a, o and u is indicated by c, and before the vowels e and i by qu.*"

4. The letter *m* at the end of a name is now replaced by *n*; it is also replaced by *n* before all consonants excepting *b*, *n* and *p*, in numerous words; as *San Boronbon* for *San Boronbom*.

5. Since 1846, the letter *j* is substituted in many words for *g*; as *Cape Jiguero* for *Cape Gigüero*, *Punta Anjeles* for *Punta Angeles*. The diæresis above the *u* serves to indicate that the *u* after *g* is to be sounded. The diæresis has now become obsolete except in a very few words. In numerous words the letter *j* has also taken the place of *x*; as *Pajaro* for *Paxaro*, *Mejillones* for *Mexillones*.

6. Modern orthography substitutes, in many words, *z* for *s*; as *Isla de Izaro* for *Isla de Ysaro*.

7. Modern orthography omits, in many cases, the letter *h* at the beginning of a word; as, *Punta de Ea* for *Punta de Hea*; *Ermite de Santa Catalina* for *Hermite de Santa Catalina*.

8. *Str* takes now the place of *xtr* in many words; as *Extremadura* for *Extremadura*.

9. The letter *i* is now substituted for *y*, except when the name begins with *y* and is followed by a vowel or at the end of a word when *y* is not sounded. In the middle of words *y* is still retained, but is changed to *i* when followed by a consonant; as *Guaira* for *Guayra*, *Paita* for *Payta*, *Buenos Aires* for *Buenos Ayres*.

According to information contained in the answer from the Chilean Hydrographer to the U. S. Hydrographic Office circular letter of inquiry, the general tendency is, however, to exchange *y* for *i*, be it final or intermediate, in ordinary language as well as in geographic names, and the Chilean Hydrographic Office now writes Lemui, Cailin, &c., for Lemuy, Caylin, &c.

In regard to the interchange of the letters *g* and *h* before *u*, which is sometimes met with in Spanish-American names, the Chilean Hydrographic Office has adopted the following rules:

(a) To write with *g* the syllable in which *u* is followed by the full vowels *a* or *o*, as Guanillos, not Huanillos; Guaina, not Huaina, &c.

(b) To write with *h* the syllables in which *u* is sounded when followed by the weak vowels *e* or *i*, as Huito, not Guito, &c., the object being to avoid the use of the diæresis on *u*, and also in order to distinguish those cases in which the letter *u* after *g* and before *e* or *i* is mute as in Llanguihue, &c.

GENERIC NAMES.

Perhaps the subject that presents the greatest difficulty in the way of prescribing any hard and fast rule for its proper treatment is that of generic names, and the experience of the Board in dealing with it is only a repetition of that of the other countries that have undertaken to handle it.

In reply to the question submitted by this Office to foreign hydrographers in Hydrographic Office circular letter of March 28th, we are informed that the British Admiralty has adopted no fixed rule for the translation of generic names—that “*in some cases it is done; in others not; but a system is in view for the uniform retention of the foreign form, and, in the case of the more common ones (island, river, cape, &c.), they are already, in the majority of cases, retained.*”

There is no question that the establishment of a fixed rule requiring the translation into English of all generic names would encounter in its application so many difficulties that exceptions would become so numerous as to nullify the rule to a very large extent.

Again, the question of those names that could be readily translated, but which are already well known under a certain form, presents another great difficulty, and the retention of the old recognized form seems to be the decided opinion of those whose views have been consulted, and all agree as to the inadvisability of suddenly wiping away well known forms of names.

In regard to the treatment of this subject, it has been suggested, and the Board is of the opinion that we should be governed mainly by the consideration of practical utility to the mariner, with due regard to uniformity of representation as far as it is attainable without detriment to the subject in view.

In treating Scandinavian names, for instance, the generic name is often written in one with the proper name, and the final syllables are subject to such variations for case and gender, that to attempt to translate the generic word would unquestionably lead to confusion, and, in fact, almost destroy the identity of the name; certainly it is doubtful if native pilots would recognize it when inquired for by persons unfamiliar with the language.

On the other hand, a possible objection to the non-translation of generic names is the fact of the original being often unintelligible to the average mariner, especially in remote countries, but we are of the opinion

that this could be overcome by following the British Admiralty system of the insertion of a vocabulary in the sailing directions, and a smaller list on the charts, of the most important words with their English equivalents.

It appears to us that the same reasons that make it desirable to render the geographic proper names in their native form apply equally to a large class of generic words, and the system, in view of the British Admiralty previously mentioned, viz, the uniform retention of the foreign form, is strongly to be recommended, if the desired uniformity is to be obtained in the nautical publications of all maritime nations.

Confronted, however, as we are with the existence of long established forms of names, we do not consider it advisable to set up a uniform standard, and, as different languages require different treatment, we are of the opinion that it must be largely left to the discrimination and to the good judgment of the compilers to determine when foreign generic words shall be rendered in the English form.

We would finally recommend the following general rule :

Foreign generic words shall not be translated into English, but where foreign geographic proper names have become familiar and are generally written in connection with English generic words, the latter shall *not* be rendered in the *foreign* form ; as, for instance, Kamchatka Bay, Gulf of Tokyo, Bay of Biscay.

In amplification of this general rule, we would add :

(a) Where the generic word is written in one with the proper name it shall not be translated. Example : Varholm, Hestskjær, Hellisoe.

(b) Descriptive and generic words forming a geographic proper name or portion of such proper name shall not be translated. Example : Grande Anse Palmiste, Anse Noir, Morro Redondo, Rio Negro ; but the meaning of such names in English may be added in brackets.

(c) When foreign purely descriptive words, in connection with generic ones, do *not* at the same time represent a proper or specific geographic name they shall be rendered in the English form only. Example : Red cliff, low ground, high mountain, &c.

(d) Where generic words of other than English origin are still in local use in connection with geographic names in the colonies under British jurisdiction, as in Canada, in portions of Newfoundland, in some of the West India islands, &c., they shall not be translated when found in the

foreign form in the latest British official publications. Example: Names on St. Lucia island (British Admiralty chart No. 1273, published in 1889), as L'Anse la Raye, Pointe du Cap, Morne Victorin, &c.

Respectfully,

CHAS. M. McCARTENEY,
Lieutenant, U. S. N.

BOYNTON LEACH,
Assistant, U. S. H. O.

GUSTAVE HERRLE,
Chief Draughtsman, U.S. H. O.

To—

The HYDROGRAPHER, *U. S. Navy,*
Hydrographic Office, Washington, D. C.

APPENDIX.

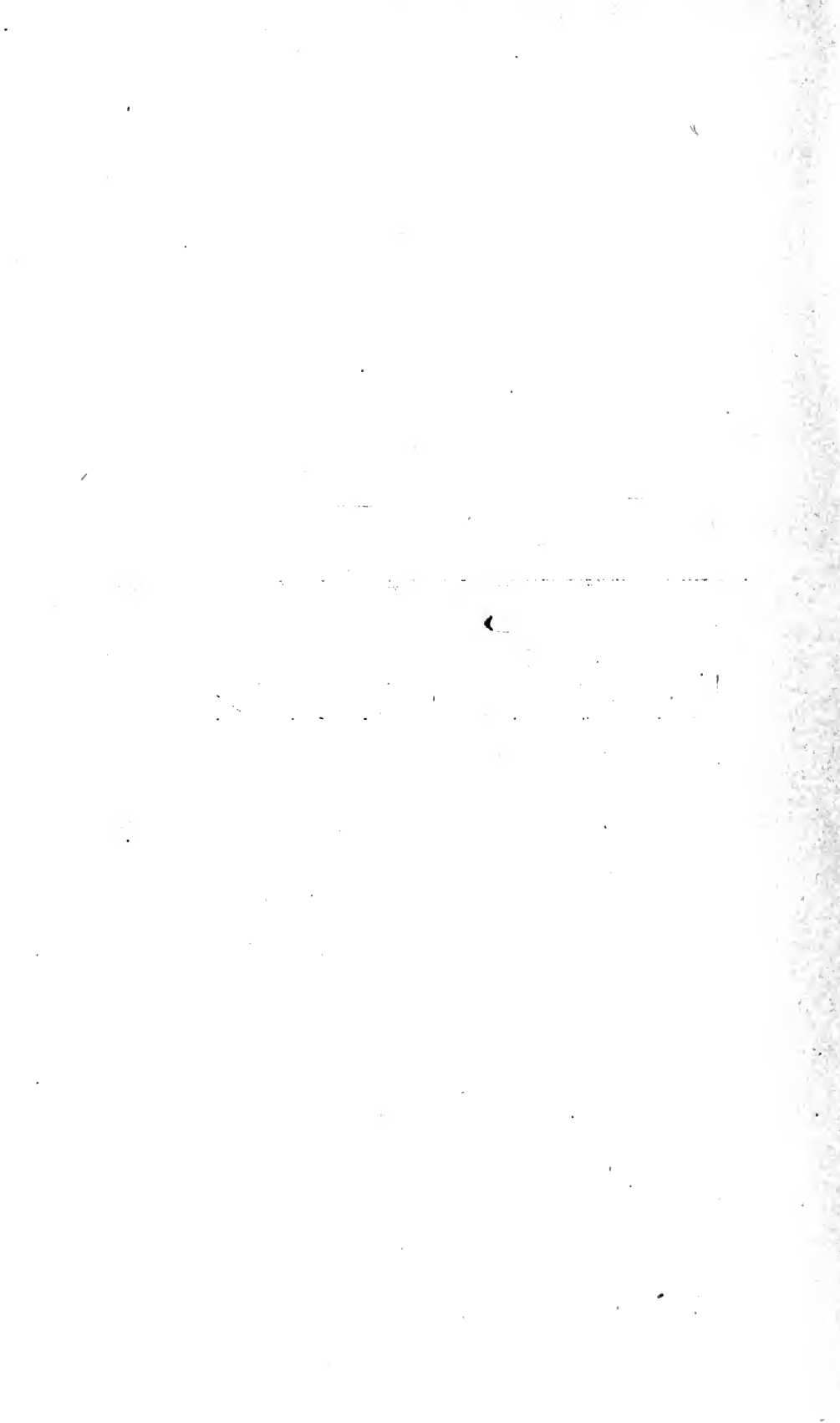


EXHIBIT A.

HYDROGRAPHIC OFFICE CIRCULAR LETTER.

WASHINGTON, D. C., *March 28, 1890.*

SIR: The United States Hydrographic Office is endeavoring to establish rules for the systematic spelling of geographic names all over the world, principally as an aid in the preparation of charts and sailing directions for publication.

Those familiar with the state of geographic nomenclature at present can not fail to appreciate the difficulties in the way of a comprehensive and uniform system of orthography, and, until a universal uniform system of spelling geographic names is brought about, this Office, like others, is forced to adopt one of its own.

A plan is now under consideration, based upon the preservation of the name as spelled in Roman characters, by recognized authorities of the country to which the place belongs.

In cases where transliteration becomes necessary, as, for example, from the Chinese or Russian, the endeavor will be to adopt a system harmonizing with those recently adopted by several nations, notably Great Britain, Germany, and France, various geographic and other scientific societies.

It will be of great assistance to know the official system used, as well as contemplated changes, by different countries. Your assistance is requested and you will confer a favor upon this Office by furnishing information in answer to the following questions, and by giving such additional information as you may deem advisable:

1. Standard geographical dictionary, or authorities on geographical names (national, local and universal).

2. System of transcription and transliteration into your language of foreign geographic names, including details of the system as applied to each language; also as to the translation of generic names, such as island, river, cape, point, &c.

Very respectfully,

HENRY F. PICKING,
Captain, U. S. Navy, Hydrographer.

EXHIBIT B.

HYDROGRAPHIC DEPARTMENT, ADMIRALTY, S. W.

LONDON, *April 14, 1890.*

DEAR SIR: I am in receipt of your letter (received on the 10th instant) in reference to the adoption of a system of orthography for charts, &c., and have much pleasure in giving you the views held here.

You are, I believe, aware that this Department has been using every endeavor for some years to improve the chaotic condition of orthography in geographical names. The Admiralty system, with which you are acquainted, has been adopted by the Royal Geographical Society of London, and by the War Office (who publish for Government use only, many maps of little known localities). It has also been accepted by the Colonial Office, who have disseminated circulars to the various British Colonial Governments. I am in hopes, therefore, that it will gain ground, and that we may have, in the future English maps, some principle in writing names new to geographers.

To revise the names at present existing is, however, a herculean task, and one that must occupy many years; for our system being, necessarily, on a phonetic foundation, the proper sound of a name is required before it can be reduced to writing. This is, I find, the most difficult item to deal with, and I am obliged mainly to content myself with reducing to system such names as are manifestly spelt in contradiction to it. This is done whenever a book of Sailing Directions is revised, as it is desirable that charts and books should go together; and on these occasions many charts undergo a complete overhaul in this respect.

With respect to names in civilized countries, the method followed with languages that do not employ the Roman character (as Russian) is to transliterate according to certain rules when we are ignorant of the sound attached to the particular combination of letters in question. I enclose our Russian system.*

We have to do somewhat the same with Dutch, in the Netherlands East Indies, as the principle has been laid down that the orthography of a name in a territory belonging to a civilized power, and given in their maps, is only followed with respect to their own names, and not to native names. Thus, the Dutch form of the Malay names *Tjilatjap*, *Goenoeng Api*, become *Chilachap* and *Gunung Api* on our charts. I also enclose our system in dealing with these cases.†

We consider no geographical dictionary as a standard, and hunt up different authorities which we consider most worthy of credence for every separate district.

* See page 19. The equivalents given in the table are the same as those enclosed by the British Hydrographer, with the single exception noted in the remarks on page 18.

† See page 37.

I can not say that we have adopted any hard and fast line yet as to the translation of generic words. In some cases and languages it is done; in others not. I have in view the uniform retention of the foreign form, and in the case of the more common ones that you mention (island, river, cape, &c.) they are already in the majority of cases retained.

The question of those names which are already well known under a certain form is another great stumbling block. It is impossible to sweep away forms known for years to all English speaking people, and where to draw the line is the difficulty.

Hunter's dictionary has been adopted as the guide for Hindustan. This was agreed to between the Geographical Society, Admiralty and others.

As it is of course only in English speaking communities that there is any necessity for the adoption of an entirely alien system for geographical orthography (as there are few combinations of letters that are not in English pronounced in different ways in different words, whereas in most languages there is a more or less definite sound attached to every letter), it will be, I fear, a long day ere any universal system can be expected; but I hope that you will see your way to adopt the principle on which the orthography in our charts and, I hope, all British maps, will be gradually revised; though it will be many years before we can hope for general adhesion, and we shall all be dead before it is carried out.

Yours, faithfully,

W. J. L. WHARTON,
Captain, R. N., Hydrographer.

CAPTAIN H. F. PICKING, *Hydrographer,*
Hydrographic Office, Washington.

HYDROGRAPHIC DEPARTMENT, ADMIRALTY, S. W.
May 16, 1890.

DEAR SIR: I am exceedingly glad to find from your letter of 28th ultimo that we are in such close accord in the principles of dealing with a reform of geographic orthography. No other system of equivalents has been formulated in this office, as, so far as we have advanced, none has been needed. We endeavor as far as possible to maintain the phonetic basis of the system, and only have recourse to equivalents when other information fails.

Yours, faithfully,

W. J. L. WHARTON,
Hydrographer.

CAPTAIN H. F. PICKING, *U. S. N.,*
Hydrographer, Hydrographic Office, Washington.

BRITISH SYSTEM.

RULES ADOPTED IN 1885, BY THE ROYAL GEOGRAPHICAL SOCIETY AT LONDON, FOR THE ORTHOGRAPHY OF NATIVE NAMES OF PLACES.

Taking into consideration the present want of a system of geographical orthography, and the consequent confusion and variety that exist in the mode of spelling in English maps, the Council of the Royal Geographical Society have adopted the following rules for such geographical names as are not, in the countries to which they belong, written in Roman character. The rules are identical with those adopted for the Admiralty charts, and will henceforth be used in all publications of the Society :

1. No change will be made in the orthography of foreign names in countries which use Roman letters : Thus Spanish, Portuguese, Dutch, &c., names will be spelt as by the respective nations.

2. Neither will any change be made in the spelling of such names in languages which are not written in Roman character as have become by long usage familiar to English readers : Thus Calcutta, Cutch, Celebes, Mecca, &c., will be retained in their present form.

3. The true sound of the word as locally pronounced will be taken as the basis of the spelling.

4. An approximation, however, to the sound is alone aimed at. A system which would attempt to represent the more delicate inflections of sound and accent would be so complicated as only to defeat itself. Those who desire a more accurate pronunciation of the written name must learn it on the spot by a study of local accent and peculiarities.

5. The broad features of the system are that vowels are pronounced as in Italian and consonants as in English.

6. One accent only is used, the acute, to denote the syllable on which stress is laid. This is very important, as the sounds of many names are entirely altered by the misplacement of this "stress."

7. Every letter is pronounced. When two vowels come together, each one is sounded, though the result, when spoken quickly, is sometimes scarcely to be distinguished from a single sound, as in *ai*, *au*, *ei*.

8. Indian names are accepted as spelt in Hunter's Gazetteer.

The amplification of the rules is given in the following table :

System of Orthography for Native Names of Places.

Letters.	Pronunciation and remarks.	Examples.
a	<i>ah</i> , <i>a</i> as in <i>father</i>	Java, Banána, So-máli, Bari.
e	<i>eh</i> , <i>e</i> as in <i>benefit</i>	Tel-el-Kebír, Oléleh, Yezo, Medina, Le-vúka, Peru.
i	English <i>e</i> ; <i>i</i> as in <i>ravine</i> ; the sound of <i>ee</i> in <i>beet</i> . Thus, not <i>Feejee</i> , but	Fiji, Hindi.
o	<i>o</i> as in <i>mote</i>	Tokio.
u	Long <i>u</i> as in <i>flute</i> ; the sound of <i>oo</i> in <i>boot</i> . Thus, not <i>Zooloo</i> , but	Zulu, Sumatra.
	All vowels are shortened in sound by doubling the following consonant	Yarra, Tanna, Mecca, Jidda, Bonny.
	Doubling of a vowel is only necessary where there is a distinct repetition of the single sound	Núulúla, Oosima.
ai	English <i>i</i> as in <i>ice</i>	Shanghai.
au	<i>ow</i> as in <i>how</i> . Thus, not <i>Foochow</i> , but	Fuchau.
ao	is slightly different from above	Macao.
ei	is the sound of the two Italian vowels, but is frequently slurred over, when it is scarcely to be distinguished from <i>ey</i> in the English <i>they</i>	Beirút, Beilúli.
b	English <i>b</i> .	
c	is always soft, but is so nearly the sound of <i>s</i> that it should be seldom used. If <i>Celebes</i> were not already recognized it would be written <i>Selebes</i> .	Celebes.
ch	is always soft, as in <i>church</i>	Chingchin.
d	English <i>d</i> .	
f	English <i>f</i> : <i>ph</i> should not be used for the sound of <i>f</i> . Thus, not <i>Haiphong</i> , but	Haifong, Nafa.
g	is always hard (soft <i>g</i> is given by <i>j</i>)	Galápagos.
h	is always pronounced when inserted.	
j	English <i>j</i> . <i>Dj</i> should never be put for this sound.	Japan, Jinchuen.
k	English <i>k</i> . It should always be put for the hard <i>c</i> . Thus, not <i>Corea</i> , but	Korea.
kh	the Oriental guttural.	Khan.
gh	is another guttural, as in the Turkish	Dagh, Ghazi.
l		
m	as in English.	
n		
ng	has two separate sounds, the one hard as in the English word <i>finger</i> , the other as in <i>singer</i> . As these two sounds are rarely employed in the same locality, no attempt is made to distinguish between them.	
p	as in English.	
q	should never be employed; <i>qu</i> is given as <i>kw</i>	Kwangtung.
r		
s		
t		
v	as in English.	
w		
x		
y	is always a consonant, as in <i>yard</i> , and therefore should never be used as a terminal, <i>i</i> or <i>e</i> being substituted Thus, not <i>Mikindány</i> , but	Sawákin.
	not <i>Kwaly</i> , but	Kikúyu, Mikindáni, Kwale.
z	English <i>z</i>	Zulu.
	Accents should not generally be used; but where there is a very decided emphatic syllable or stress, which affects the sound of the word, it should be marked by an <i>acute</i> accent ..	Tongatábu, Galápagos, Paláwan, Saráwak.

EXHIBIT C.

MARINE & COLONIES, ÉTAT-MAJOR GÉNÉRAL,
SERVICE HYDROGRAPHIQUE,

PARIS, May 1, 1890.

SIR: In reply to your letter of the 28th of March last (No. 1455), I have the honor to send you two copies of a circular of the Minister of Marine, fixing the orthography which should be employed in the charts of the hydrographic service.

Accept, sir, the assurance of my highest consideration,

A. BOUQUET DE LA GRYE,
Hydrographic Engineer-in-Chief.

The HYDROGRAPHER, *U. S. Navy,*
Washington, D. C.

[Translation of circular order (No. 217) of the French Minister of Marine.]

ORTHOGRAPHY OF GEOGRAPHIC NAMES.

The Senator, Minister of Marine and the Colonies, to the Vice Admirals, Commanders-in-Chief, Maritime prefects: General Officers, Superior Officers and others commanding at sea; Generals Resident, Governors of Colonies; Commissary General of the Government in the French Congo; Commandants of Colonies; Rear Admirals commanding the Naval Forces in Algeria and in Corsica:

(General Staff and Office of the Minister. 2d Bureau, Fleet Movements and Military Operations.)

PARIS, June 21, 1887.

Orthography hereafter to be employed by the hydrographic service for geographic names of countries which have no proper alphabet, or which do not make use of the Roman characters:

GENTLEMEN: I have the honor to inform you that I have decided that the hydrographic service of the Navy will use hereafter for the orthography of geographic names of countries having no proper alphabet, or not making use of the Roman characters, the rules recommended by the Société de Géographie, and which are given in the accompanying document.

This system, which has been established by competent authority, has obtained the sanction of the Committee on Geographic Science, which operates by direction of the Ministry of Public Instruction; also, I have every reason to think that its use will avoid confusion in the publications of the hydrographic service, and will permit of more ready recognition of geographic names on the charts of foreign nations that adopt this natural and practical method.

Receive, &c.,

E. BARBEY.

FRENCH SYSTEM.

RULES ADOPTED IN APRIL, 1886, BY THE SOCIÉTÉ DE GÉOGRAPHIE AT PARIS, FOR THE ORTHOGRAPHY OF NATIVE NAMES OF PLACES.

The geographic names in countries in which the Roman character is employed in writing (which includes the néo-Latin, Germanic and Scandinavian languages) shall be written in the orthography of the country to which they belong.

The following rules apply solely to geographic names in countries without a written language and to geographic names in countries where another than the Roman character is employed in writing.

Names of places for which the orthography, through long usage, has become consecrated shall, however, be excepted from the rules. Examples: La Mecque, Naples, Calcutta.

The rules in detail are:

1. The vowels *a*, *e*, *i* and *o* are pronounced as in French, Spanish, Italian and German. The letter *e* shall never be mute.

2. The French sound of *u* shall be represented by *u* with a *tréma* like the German *ü*.

3. The French sound *ou* shall be represented by *u*, as in Italian, Spanish and German.

4. The French sound *eu* shall be represented by the character *æ* and be pronounced as in *œil*.

5. The lengthening of a vowel sound shall be indicated by the *accent circonflexe* (^) and the shortening by an *apostrophe* (').

6. The consonants *b*, *d*, *f*, *k*, *l*, *m*, *n*, *p*, *q*, *r*, *t*, *v* and *z* are pronounced as in French.

7. *g* and *s* have always the hard French sound, as in *gamelle*, *sirup*.

8. The sound represented in France by *ch* shall be written *sh*. Example: *Shérif*.

9. *Kh* represents the strong and *gh* the soft Arabic guttural.

10. *Th* shall represent the articulation in the English word *path* (Greek *θ*), and *dh* the sound of *th* in the English word *those* (Greek *δ*).

11. Unless the letter *h* is employed to modify the sound of the letter preceding it, it shall always be aspirated; it should, therefore, never have an apostrophe in names beginning with it.

12. The *i* semi-vowel shall be represented by an *y*, pronounced as in *yole*.

13. The semi-vowel *w* is to be pronounced as in the English word *William*.

14. The double sounds *dj*, *tch*, *ts*, &c., shall be written with the letters which represent the sounds of which they are composed. Example: *Matshim*.

15. The *ñ*, *n* with a *tilde*, is to be pronounced like *gn* in *seigneur*.

16. The letters *x*, *c* and *q* are not to be employed as duplicates, but the letter *q* may serve to represent the Arabian *qaf*, and the *āin* may be represented by a double dot.

It should be the aim to indicate with the letters here given the local pronunciation of a name, as nearly as possible, without necessarily giving a complete reproduction of all the audible sounds.

MINISTÈRE DE LA MARINE, ÉTAT-MAJOR GÉNÉRAL,
SERVICE HYDROGRAPHIQUE,
PARIS, *February 19, 1891.*

SIR: I have the honor to send you the following information in reply to your letter of the 7th of February last:

In regard to the transcription of Annamite and Cochin-Chinese names, without binding themselves to any fixed rules, our hydrographers have attempted only the closest approximation of the pronunciation of the names of places.

A ministerial decision, dated June 21, 1887, decided to use the rules proposed by the Geographical Society of Paris for the orthography of foreign names. These rules you will find given in the accompanying copies of the order. (See French System.)

Circumstances, up to the present, have not permitted the application of these rules to the spelling of the names found on our charts of Annam and Cochin-China. This explains the discrepancies that you have noted.

Accept, sir, the assurances of my highest consideration,

L. MANEN,
Hydrographic Engineer-in-Chief.

The HYDROGRAPHER, *U. S. Navy,*
Washington, D. C.

EXHIBIT D.

DER STAATSSSEKRETÄR DES REICHS MARINE AMTES,
BERLIN, *April 14, 1890.*

SIR: In answer to your letter of the 28th of last month (No. 1455), I have the honor to respond that the rules published in the "Annalen der Hydrographie of 1888," on page 543, and in the "Nachrichten für Seefahrer of 1888," on page 624, referring to the orthography of geographic names, form the base for our official publications, and have up to the present time proved satisfactory, and are still in force. In the transliteration of names from languages with foreign characters, as from Chinese and Russian, we try, as far as practicable and possible, to render the original sound of the respective language with the aid of the letters adopted in said rules.

It may further be mentioned that these rules are, as far as possible, in accordance with those adopted by the Geographical Society in London, and by the British Admiralty, for the purpose of ultimately obtaining international uniformity in the spelling of geographic names.

By order,

MENSING.

The HYDROGRAPHER, *U. S. Navy,*
Washington, D. C.

GERMAN SYSTEM.

ORTHOGRAPHY AND PRONUNCIATION OF GEOGRAPHIC NAMES.

The Imperial German Hydrographic Office will, in future, base the orthography of foreign geographic names on the following rules:

Names from nations who use the Latin or German alphabet are to be rendered in their native form excepting names that have become Germanized; as Kopenhagen, Neapel, Genua. Neither will other foreign names be changed which are generally known and whose orthography has been generally adopted; as Zanzibar (not Sansibar), Zulu (not Sulu).

The letters in foreign names are pronounced as follows:

a—as a in Vater.

ä—between a and o; (Ålands Inseln).

e—as e in Eden.

i—as i in Ida.

o—as o in Brot.

u—as u in nur.

ä—ae, Ae

ö—oe, Oe

ü—ue, Ue

ai—as ai in Kaiser.

au—as au in auch.

ao—not quite as one sound.

ei—as Ei.

b, d, g, h, j, k, l, m, n, p, r, s, t, w, x and z retain their German sounds.

f—retains its German sound also for ph, but the latter will not be used.

c—always soft (as z). For the sound of k, c is not to be used.

j—as the English j (dj).

q—will not be used, k takes its place; also ku.

ch—as tsch.

sh—as sch.

y—is only used for the consonantal sound, not for i.

gh—oriental guttural, as in Dagħ, Ghazi.

kh—oriental guttural, as in Khan.

v—always soft, not to be used to give the sound of f.

When a vowel is to be pronounced clear and open, the following consonant will be doubled; as Tanna, Mekka, Bonny. Doubling of a vowel is only necessary where there is a distinct repetition of the single sound, as in Nuulua, Oosima. But one accent (') will be used to indicate in particularly necessary (exceptional) cases the syllable on which stress is to be laid; as in Matupí.

EXHIBIT E.

LETTER OF THE SPANISH HYDROGRAPHER.

SIR: I have received the circular letter of the 28th of March last which you were pleased to send me, announcing the proposition of your office to establish a system of geographical nomenclature, and to utilize it in the charts and sailing directions to be published.

You explain a system (that appears to me to be very proper) to retain the name as written in Roman characters by the recognized authorities of the different countries to which the designated places belong. Also, when a transliteration from languages that use other characters, or none at all, becomes expedient and necessary, then the tendency is towards the system adopted by several nations, more especially England, Germany and France, and by different geographical and scientific societies.

Finally, I am requested to reply to two questions:

1. Information upon the geographical dictionaries of a local, national or general character that exist in Spain.

2. System adopted in our country for geographic nomenclature and Spanish treatment of geographic generic names such as island, river, cape, &c.

I will commence by saying that we have in Spain an official nomenclature, or list of all the cities and villages that there are in the 49 provinces, or in the Peninsula and Balearic and Canary Islands. The geographical dictionary by Don Pascual Madoz, published in 1845-'50, is of a national character; also a dictionary of the corporations of Spain (cities and towns) by Señor Mariana.

Of a general character, there is the geographical dictionary by Riera, 1880-'85; the Spanish-American Encyclopedia (being published); the Universal Geography, published in 1830, by a literary society.

Of a chorographical character, the Geographical dictionary of Navarra and of the provinces of Alava, Guipúzcoa and Biscay, published by the Royal Historical Society (academy) in 1802; that of the island of Cuba, by Don Jacobo de la Pezuela, 1863; and that of the Philippine islands, by Buceta and Bravo, 1850.

The Royal Historical Society (academy) published many years ago a vocabulary of geographic generic names, and recently has published another more complete, with the corresponding French names, by Professor Don Juan Vilanova y Piera.

Respecting the system of geographic nomenclature used in Spain, I would only say that the Geographical Society of Madrid is the authority which has made the most leisurely study of this subject, finally announcing its decision in the following rules:

1. Respecting the orthography of geographic names among nations using the Latin alphabet (néo-Latin languages, German and Scandinavian), it is desirable to retain only the translations admitted by long usage; for example, in Spain, the sound in current use of the names—Burdeos, Marsella, Londres, La Haya, Aquisgran, Ratisbona, Transilvania, Palatinado del Rhin, Viena, Austria, Padua, Liorna, Ginebra, and Mosa (river), &c., which in the idiom of the nations to which they belong are written respectively Bordeaux, Marseille, London, 'sGravenhage, Aachen, Regensburg, Siebenbürgen, Pfalz, Wien, Oesterreich, Padova, Livorno, Genève, and Meuse (in French) or Maas (in German).

These and similar translations should be retained, but differing so much from the original names, should be given in both ways on the maps, since it is impossible to require a knowledge of the various idioms from the reader.

2. Regarding a precise transcription of the names from languages that have a distinct alphabet, like the Russian; that make use of special characters, like the Chinese; or that lack a written language, the Geographical Society is of the opinion that the said names should be written according to the sound as heard (phonetic value), but taking into account that the Spanish alphabet (like many others) has not letters for all the sounds, the Society has conceived the idea of supplying this deficiency by underscoring certain of them in order to express these sounds. Thus—

- e represents the sound of the mute e in French.
- u that of the French u or German ü.
- y that of the French dj.
- x that of the French ch, or sh English, or German.
- ll that of the double l.
- z that of the French z and of similar sounds.
- v that of the same sound in French.

With these additional marks, a transcription can be obtained sufficiently exact; but the system adopted by the Society has not been officially established, and is only followed in some particular publications like the encyclopedia before mentioned, and in the Geography of Reclus (Spanish translation).

As the result of the deliberations of the Geographical Society upon this important point was reached the same year that it was created (1876), and as then each country used the nomenclature that appeared most convenient to it, it was not possible to conform to the French orthography, much less to the insecure English, by the transcription of the resulting barbarous and in our idiom extremely unpronounceable names. An illustration will make this impossibility apparent. The English write the

word *Rangoon*, in order to designate this Asiatic city ; the French, *Rangoun* ; and if the Spaniards, Italians or Portuguese have to represent this name in their idioms, they should have to write *Rangun*, which on their part opposes the transcription of the English or French.

The English and the French write *Bukhara*, in order to indicate the khanate of that name in the northeast of Persia, but in fact its true pronunciation is that which, in Spanish, is given by the word *Bujara*, with the proper and guttural sound of our *j* ; this letter not existing with the same value in English and French, they have to make use of the letters *k* and *h* aspirated, and consequently to vary the orthographical aspect. In German, they write *Buchara* because the *ch* approximates to the Spanish value of *j*.

I have made these reflections the more willingly, in order to conduce to the most complete harmony possible in the geographic nomenclature of our publications with that used by other countries ; I am, therefore, disposed to adopt the system announced by the Geographical Society of Paris, in its Bulletin of 1886, pp. 193–202, with the few modifications rendered necessary by the peculiarity of our idiom, which are expressed as follows :

1. As to exceptions, the Spanish translations of certain geographic names, which long usage has naturalized will be retained, as *Burdeos*, *Londres*, *Nápoles*, *la Meca*, &c.

2. The geographic names of countries which use the Latin characters will be spelled in accordance with the proper orthography of those countries.

3. As to the geographic names of countries which do not use a written alphabet, or which use characters different from those of the Latin alphabet, the following rules are presented :

1. The vowels *a*, *e*, *i*, *o*, *u* will always retain the fixed values given them in the Spanish idiom.

2. The sound of the French *u*, and its equivalent in English and German, will always be indicated by the diæresis (*ü*).

3. The diphthong *eu*, with its equivalents in other languages, will be represented by *œ*.

4. The long vowels, or those which should have a prolonged sound, will be expressed as usual in Spanish, with an accent or comma, as *Nápoles*. There is no equivalent of this accent in French.

5. The consonants *b*, *d*, *f*, *k*, *l*, *m*, *n*, *ñ*, *p*, *q*, *r*, *s*, *t*, will be pronounced as in Spanish.

6. The *g* will take the soft sound before the vowels *a*, *o* and *u*, as in

Spanish. When it comes before the *e* and *i*, the *u* will be interposed in order that the softness of the sound will be preserved, as *gato*, *goma*, *gula*, *Guetaria*, *Guipúzcoa*.

7. *j* will retain the strong guttural sound that this letter has in Spanish, and which, in French and English, is expressed by the *k* and *h* aspirated, and in German by *ch*, because they have no especial sign to indicate it.

8. *c* and *z* forming syllables, respectively, with the vowels *e*, *i*, *y*, *a*, *o*, *u* will indicate the sound of the English *th* (*θ* theta), in the word *path*; as *Zamora*, *Zuazo*, *Cervera*, *Cifuentes*.

9. When the letter *h* is employed it will always be considered aspirated, a sound not belonging to Castilian, but known to Spaniards from use in several provinces.

10. *y* will always be used as a consonant, that is to say, as in the Spanish words *Yegua*, *Yuca*, and for which the English (?) and French substitute *dj*.

11. The double *ll* will be written with a dash between, thus *l-l*, because the *ll* has its own proper value in Spanish.

12. The *w* will be used with its English value.

13. The French sound of *ch* will be expressed by *sh*, which is in use in English and German.

14. As our language lacks the sound of *z* given in French and other languages, it is necessary to give it a diacritical sign, thus *z'*.

I believe I have given you the information asked of me, and you will also see my earnest desire to adhere to a general system of geographic nomenclature, notwithstanding the difficulties which present themselves where the Spanish language is concerned, and on account of which I have tendered these remarks.

PELAYO ALCALÁ GALIANO.

MADRID, April 22, 1890.

The HYDROGRAPHER, *U. S. Navy*,
Washington, D. C.

EXHIBIT F.

No. 2718.]

MARINE DEPARTMENT, OTTAWA,
June 18, 1890.

SIR: In reply to your enquiries of the 30th March last (No. 1415), respecting the systematic spelling of geographic names in Canada, I have the honor to transmit herewith, for your information, a memorandum by our Engineer, giving I think all the information you require on the subject.

With reference to your request for map publications, I may state that all Canadian charts are yet published by the British Admiralty, from whom doubtless you receive them regularly. I shall see that your office is on our list for all papers, maps or pamphlets that we do publish.

Some maps and plans of greater or less general interest are published by the Canadian Geological Survey, Department of the Interior, and Department of Public Works, which would all, I am sure, send you them if you applied officially.

I have the honor to be, sir, your obedient servant,

JOHN HARDIE,
for Deputy Minister of Marine.

CAPTAIN HENRY F. PICKING, *U. S. N.,*
Hydrographer, Washington, D. C.

MEMORANDUM ON ORTHOGRAPHY OF PROPER NAMES.

No. 2718.]

MARINE DEPARTMENT, OTTAWA,
June 13, 1890.

Referring to the enquiries of the American Hydrographer, I beg to say that in Canada there is no recognized authority on the orthography of geographic names and no recognized system employed, although the want of some uniform system and central authority is very keenly felt, especially as the names of English, French and Indian origin are everywhere interfering with one another and require to be reconciled. I append a copy of a memorandum issued by the Dominion Land Survey's Association two years ago, which goes into the subject so fully that it is needless for me to enlarge upon it. No action following that memorandum has yet been taken.

With respect to the usage of this office, it has always been our rule to follow the forms of the Admiralty charts, except where those forms have become archaic, and a further guide has been the usage of our Post Office Department (though I fear an untrustworthy one).

We have had so little occasion to treat of universal names, or of transcription and transliteration of foreign ones, that we have never felt the want of a system in this respect.

WM. P. ANDERSON,
Engineer of Marine Department.

EXHIBIT G.

SANTIAGO DE CHILE, *May 13, 1890.*

SIR: I have had the honor of receiving your communication relative to a project of uniformity and simplification in the writing of geographic names, with the purpose of arriving at a definite system of inscribing them on charts, in sailing directions, and in notices to mariners. In reply to the said communication, I take pleasure in responding as follows:

In Chile there has never been any great difficulty in translating according to the Castillian pronunciation and writing the Indian names of places, inasmuch as almost all the combinations or articulations of the Araucano idiom contain equivalents in Spanish. The cases that might form an exception to this rule have been modified by custom and vernacular dialect, and this modification has finally prevailed.

Only two difficulties have persisted in defying as yet the orthography of geographic names in Chile, and they are as follows:

1. The combination, in diphthong, of the vowel *u* with the other four vowels, and followed by these last, has given place to a vexatious ambiguity of orthography when said diphthongs are preceded by the consonants *g* or *h*, which the majority of Chileans, by perversion of pronunciation, articulate in a manner nearly identical.

In the following, for example, the pronunciation is the same, "Huafo" (the name of an island near Chiloé, and a word derived from the Araucano) and "Guanillos;" also in the words *guap* and *huenú* (in Araucano, island, and altitude or height), that form part of many geographic names. It would be easy to enumerate these examples of words that some write with *h* and others with *g* without, hitherto, one system predominating over the other. But this office, in accordance with the opinion of authorities on the subject, has adopted the following rule:

To write with a *g* the combinations in which the *u* is followed by a full vowel, as in the syllables *gua* and *guo*; and with *h* those in which the last vowel is weak, that is to say, the syllables *hue* and *hui*, with the object of avoiding the use of the diæresis on the *u*, which would have been necessary if written with *g*, in order to distinguish the cases in which this letter is followed by mute *u*, as in the syllables *gue* and *gui*, pronounced exactly as in French. Briefly, it is preferable to write *Guafo*, *Aconcagua*, &c., and *Llanguihue*, *Huito*, &c.

2. The final *i* sound is written by some with *y*, following an ancient custom inherited from the Spanish writers; but the general tendency at present, following the sensible reforms instituted by illustrious grammarians, is to exchange the *y* for *i*, be it final or intermediate, in ordinary

language as well as in geographic names. In this office we have always written Lemui, Cailin, &c., in place of Lemuy, Caylin, as was formerly the custom.

With regard to the orthography of foreign geographic names, it has been the custom of this office to respect the mode of writing of each country. Proper names or patronymics are copied (transcribed) in the same form, save in a few cases where usage has sanctioned the contrary: "Cabo de Hornos" in place of "Cabo Horn;" "Islas Ermita" in place of "Islas L'Hermite." Here one notes, moreover, the tendency so general in Chile, to simplify the writing even of names which should always hold, if thereby they do not become too much altered. In this way some write "Canal Mesier," "Cabo Dungenes," &c., simply changing the double *ss* for the single letter in these names.

Regarding the works that may be considered authorities or guides on this subject, I can cite only the following:

1. "El Diccionario jeográfico de Chile, por F. S. Astaburuaga," New York, 1867.
2. "Un informe pasado a la Universidad, por Don B. Vicuña Mackenna," in the *Annals of the University* of 1863.

In the foregoing, I believe I have answered the greater part of your communication, and I improve this opportunity to offer the expression of my most distinguished consideration.

FCO. VIDAL GORMAZ.

The HYDROGRAPHER, *U. S. Navy*,
Hydrographic Office, Washington, D. C.

EXHIBIT H.

No. 36.]

MINISTERIE VAN MARINE,
AFDEELING HYDROGRAPHIE,
'S GRAVENHAGE, *May 19, 1890.*

SIR: In reply to your letter of March 28, 1890 (No. 1455), I have the honor to inform you—

1. The kingdom of the Netherlands possesses no standard works concerning the spelling of geographical names of its country and its colonies; also, it has in that science no recognized authorities. The dictionary of geographical names in the Netherlands, published by the Dutch Geographical Society (*Woordenlijst van de Aardrijkskundige namen in Nederland van het Nederlandsch aardrijkskundig Genootschap*, 2d druk, Amsterdam, C. L. Brinkman), may, however, be regarded as a standard, because a great many authors of geographical school-books of the Netherlands and chart and atlas makers follow it.

As concerning the Dutch colonies in the East and West Indies, there exists no dictionary that can be considered as authoritative.

For the spelling of these names, we have recourse to the best descriptions and atlases of India; for instance, Veth's *Java*, Havenga's *étappe kaart van Java*, de *residentiekaarten van Java*, &c. The only official spelling is that which is to be met with in the colonial report (*het koloniaal-verslag*) and other publications of the government; but this spelling is not absolutely recognized to be the best.

2. A system of transcription of foreign geographical names in the Dutch language does not exist; every one follows his own opinion in this matter, and hence there is no uniformity. For this reason it is impossible to give any particulars on the subject. A translation of foreign geographical names is to be found in a list in an atlas entitled "*Oro-hydrographische en Staatshuiskundige atlas der geheele aarde door J. Kuyper, J. N. W. Posthumus*, 5th druk, 1884, Zwolle Tjeenk Willink," but it is a very incomplete and imperfect one, and many of the names which are to be found in it are often entirely arbitrarily changed. You will find in the above-mentioned list several words which are often to be met with in geographic works in the German, Roumanian, Slavonian, &c., and Asiatic languages, but two words are frequently placed next each other, of which the signification is not just the same. The transcription is, moreover, very imperfect; for instance, the transcription of Russian words is partly in the Dutch manner, though evidently this has not been the intention, as, Nisjuyi for Nizjuyi, Sheltiyi for Zjoltiyi, Corota for Worota, Sapad for Zapad, &c.

Regretting very much that I do not see any means of furnishing you with a somewhat more positive answer, I have the honor to be, sir, your obedient servant,

DE V. D. BROECKE,
Captain, Hydrographer.

The HYDROGRAPHER, *U. S. Navy,*
Washington, D. C.

EXHIBIT I.

BATAVIA, *June 23, 1890.*

SIR: In answer to your letter of May 20, 1890, I can say that no standard geographical dictionary of the Indian languages in Netherland India exists.

Concerning the spelling of the names, of which I informed you some time ago,* it may be observed that these names are not translated into Dutch, but the native names are retained.

Besides the native names, some European names exist, which have been adopted locally.

The transcription, in Roman characters, into Dutch, of the native names, takes place according to the sound of the Dutch alphabet. In order to write these names in any language, it is necessary to know the native pronunciation. The spelling differs, of course, in accordance with the language in which it is transcribed. For instance, the name *Chirebon* is correct in the English language; in Dutch it ought to be written *Tjirebon*, in order to give back the native pronunciation.

To get good spelling in English, it will be best to try to find a Dutchman who knows the Malay language, and who can give verbally the necessary information.

Very respectfully,

EDELING,

Director of the Hydrographic Office.

The HYDROGRAPHER, *U. S. Navy,*
Washington, D. C.

EXHIBIT J.

UFFICIO IDROGRAFICO DELLA REGIA MARINA,
GENOVA, *May 2, 1890.*

SIR: In reply to your letter of March 28, 1890, I have the honor to communicate the following:

The names in foreign languages which use the Roman characters are transcribed by us, with the same orthography, exceptions being made in a few names, the spelling of which has been established by usage in our language.

The names derived from Russian or from Oriental languages are transliterated into our language, attributing to the vowels the sounds they have in the Italian language; and for the consonants and vowels not existing in our language, we follow the principles laid down in the Admiralty Manual of Scientific Enquiry, published by the English Government.

Respectfully,

A. BIANCHERI,
Il Direttore.

The HYDROGRAPHER, *U. S. Navy,*
Washington, D. C.

* See letter on page 37

EXHIBIT K.

K. K. KÜSTENBESCHREIBUNGS-BUREAU,

TRIESTE, *May 22, 1890.*

SIR: The Director of the Hydrographic Office in Pola has sent your letter (No. 1455), dated Washington, March 28, 1890, to me, as its purpose stands in some relation to my official duties. I will try to answer your questions to the best of my knowledge and add my views on some particulars relative thereto, directing you for further information to the Militär Geographisches Institut and the Akademie der Wissenschaften, both in Vienna.

In answer to question 1, I can state that we have for every province in the empire, official repertories of the names of every place in it, viz:

Special Ortsrepertorium von Steiermark, von Kärnten, von Krain, von Böhmen, von Tirol and Vorarlberg, vom Küstenlande, von Mähren, von Schlesien, von der Bukovina, von Galizien, von Nieder Oesterreich, von Ober Oesterreich, von Salzburg; Geographisch-statistisches Repertorium der bewohnten Orte im Königreich Dalmatien; Slovník geografický (Geographisches Lexicon) des Königreichs Polen und anderer slavischer Länder; Ortslexikon des Königreichs Polen; Ortschafts und Bevölkerungs Statistik Bosniens und der Hercegovina.

The names of places in the kingdom of Hungary are contained in the Ortslexikon von Ungarn by Jekelfalussy, and in the Postlexikon der Länder der ungarischen Krone.

For the adjacent part of Russia, Ortslexikon von Russland.

All these books give only the names of inhabited localities, towns, boroughs, villages, &c.; those of rivers, mountains, &c., can only be taken from charts, the best of which are published by the "Militär Geographische Institut." A new general chart of central Europe (1:200000) is in process of publication.

For the coast, we have a complete set of charts, newest edition November, 1889. Sailing directions in German are ready for the press.

Referring to question 2:

The names of foreign localities are spelled in our official works exactly as they are spelled in the language to which they belong.

Comparatively few localities have a proper German name differing from the national one, as, for example, Mailand=Milano, Kopenhagen=Kjöbenhavn, Rothes, Schwarzes Meer=Red, Black sea, Themse=Thames; these are used; and also if such localities have distinct names in several languages; as Goertz for Gorizia or Gorice.

Russian geographic names are spelled in Roman characters and rendered as nearly as possible by the Polish orthography.

Asiatic, African, Australian and American names are spelled in the European language that is there the most used.

For additional information I think I may add :

All the languages spoken in Austria can be spelled in the Roman characters ; as German and Serbian. The latter is identical with Croatian, from which it differs in nothing but the use of the Cyrillic alphabet.

Each one of these (and several other languages) has its own simple and unvarying system for the rendering of every sound in it by letters used in accordance with rules which leave no doubt as to the pronunciation of any word.

These precepts are generally but few, and very easily rendered in a synopsis that can accompany a book, or that may be printed on a chart.

There are, in most languages, letters that can not be rendered in every other language, because the sounds they indicate do not exist in both ; as the German "ch" in English, the English "th" in German or the Polish *Ł* in both.

Every nation has, besides, its own peculiar way of articulating sounds that can not be rendered by letters, and which can scarcely be explained by words. Still spelling and pronunciation may be made to go together sufficiently to exclude any doubt on the sound that ought to be given to a syllable. A little experience will make every reader pronounce a foreign word in the same manner and intelligible to the nation it belongs to.

The difficulty begins and is not to be surmounted by such methods if English has to be read and pronounced by a foreigner. Every vowel has in it several different sounds that are not indicated by the spelling, and syllables composed of quite different letters are rendered by an identical sound of the voice. It is necessary to learn separately by heart how every single word has to be pronounced ; it is impossible to write an unknown or foreign word in English so that every English reader is constrained to pronounce it exactly the same.

Of the languages of which I have some knowledge, it is only in English that the pronunciation of every vowel and syllable must be indicated singly by signs or numbers, as is done in pronouncing dictionaries. We consider, generally, the geographic appendix to Webster's Dictionary (New York and London) to contain the best system of the pronunciation of geographic appellations originating in different languages but spelled in English.

No universal system indicating the pronunciation of any human sound used in whatever language by a systematic use of letters and signs has as yet, to my knowledge, been introduced for practical purposes. Relative endeavors form a subject of scientific philology and linguistic discipline with which I am not conversant.

I have the honor to be, sir, your obedient servant,

F. BARON DE HAAN,

Captain, I. & R. Navy,

Vorstand des K. & K. Küstenbeschreibungs-Bureaus.

The HYDROGRAPHER, *U. S. Navy,*
Washington, D. C.

EXHIBIT L.

No. 104.]

SØKKAART ARCHIVET,
KJØBENHAVN, d 19 April, 1890.

SIR: With reference to your letter of March 28th (No. 1455), I have the honor to inform you that—

Our authority on geographical *Danish names*, as used in charts and sailing directions, is “Statistisk-topografisk Beskrivelse af Kongeriget, Danmark, ved I. P. Trap, Kjøbenhavn, 1879.” But in the spelling of several names it has been found necessary to write in harmony with the practice of seamen.

On *Icelandic names*, “Uppdráttir Islands á fjórum blöðum” (Chart of Iceland, in four sheets), published by the Literary Society of Iceland (Islenzka Bókmentafélagi), but transliterated in Roman characters.

On *Greenlandic names*, “Den Grønlandske Ordbog af Sam. Kleinschmidt, 1871,” published by the Church and School Department in Copenhagen.

Foreign names are in general spelled in the way used in the charts and directions in the country to which the place belongs, and it is a general rule that generic names are not translated.

In reply to your question about the accepted standard dictionary of the Danish language, I have to inform you that this is the “Dansk Ordbog af Christian Molbeck, Kjøbenhavn;” but this book is now rather old-fashioned.

Very respectfully,

G. HOLM,
p. t. Director.

The HYDROGRAPHER, *U. S. Navy*,
Washington, D. C.

EXHIBIT M.

H. I. J. M'S HYDROGRAPHIC OFFICE,
TOKYO, *May 8, 1890.*

SIR: In reply to your letter of the 22d March, I beg leave to say that—

1. The system used in transcribing Japanese names in notices to mariners into English equivalents in this office is in accordance with the Romanizing system.

2. It is a definite system of this office, not having in view future change.

3. I regret to say that I do not quite understand what you mean by your question.

3. If you want to know our system of translating Japanese names, written in Chinese characters, into English, I beg to reply that all the names of places are translated in accordance with the Romanizing system, as in notices to mariners, only with the following exceptions, which are translated into English:

Bay, as in Wakasa Bay; harbor, as in Nagasaki Harbor; peninsula, as in Noto Peninsula; anchorage, as in Shimonoseki Anchorage; and strait, as in Nagato Strait.

Islands and island are transcribed in both ways, Romanizing and English, according to the most customary saying; that is—

Jioga shima (not Jioga island), Tsuru shima, Hime shima, Yeno shima; and Oki island (not Oki-no-shima), Sado island, Yayeyama islands, &c.

Yours, very respectfully,

K. KIMOTSUKI,
Captain & Hydrographer, I. J. N.

CAPTAIN HENRY F. PICKING,
Hydrographer, U. S. Navy, Washington, D. C.

EXHIBIT N.

HYDROGRAPHIC OFFICE, U. S. NAVY,
WASHINGTON, D. C., *February 26, 1890.*

SIR: I have the honor to request your assistance in furnishing the Hydrographic Office with a correct and full transcription of the Japanese syllabary, or "Go-ju-on," in the characters used on the nautical charts published by the Hydrographic Office at Tokyo.

The English transcription of the "Go-ju-on," which this Office proposes eventually to adopt, is here appended, and it is desired to have the corresponding Japanese equivalents written below the English ones.

Especially is it desired to learn the character of the diacritical signs which are supplied to indicate changes in pronunciation from gawa to kawa, shima to jima, &c.

I would be obliged, also, for any additional suggestions that may occur to you, which would aid this Office in arriving at a consistent method in formulating rules for the transcription of Japanese geographical names into English.

I am, sir, very respectfully, your obedient servant,

HENRY F. PICKING,
Captain, U. S. Navy, Hydrographer.

His Excellency,

MUNEMITSU MITSU,

*Envoy Extraordinary and Minister Plenipotentiary,
Japanese Legation, Washington, D. C.*

LEGATION OF JAPAN,
WASHINGTON, D. C., *March 13, 1890.*

MY DEAR SIR: I have the honor to acknowledge the receipt of your letter, dated the 26th ultimo, addressed to Mr. Mutsu, requesting him to furnish you with a correct and full transcription of the Japanese "Gojuon," and also Japanese equivalents, &c., and in reply I beg to return to you, herewith enclosed, the copy of the English transcription you sent, with a correction, and the Japanese equivalents inserted as desired. (See page 25.)

As regards the diacritical signs, there are two, as you will notice in the enclosure, namely, ° and ", which are placed on the right and upper part of certain characters. The former changes h or f to p sound, and the latter changes k to g, s to z, sh to j, t to d, ch to j, ts to z, h to b, and f to b.

I am, sir, very respectfully, your obedient servant,

AIMARO SATO,
Chargé d'Affaires.

CAPTAIN HENRY F. PICKING, *U. S. N.,
Hydrographer, Hydrographic Office,
Washington, D. C.*

EXHIBIT O.

WASHINGTON, 1890.

GENTLEMEN: In answer to your inquiries relative to Korean geography, I submit the following:

The state of the geographic knowledge of the Koreans of their own country is fair, but of an unscientific nature. They have no knowledge of latitude, longitude, or of any system of co-ordinates, except such right lines as are suggested by the compass, and it is probable that a majority of the people at the present day consider the earth flat. They have no systematic geographic service like the Japanese, nor is it likely that any such will exist for some time to come, as it would be far in advance of present progress in other lines.

Fair native maps exist, however, which are worthy of close study. To two of these I would give special mention: (1) A large map in twelve sheets, constructed in sections formed by parallel lines drawn from east to west, prepared about twenty years ago, by order of the Regent. (2) A map giving the country in eight sheets by provinces; a copy of which is now in my possession and is at your service.

In my opinion the most practical way of rendering Korean proper names into English would be through the employment of the system of transliteration developed by Mr. E. M. Satow, of the British Consular Service, and already put to practical use in his work entitled "System of Korean Proper Names."

I may mention here that Korean proper names are of Chinese origin and are invariably represented upon Korean maps by Chinese characters. To this rule I know of but few exceptions, the most important of which occurs in the name of the capital, Söul, a true Korean word, itself signifying capital. The characters in which the names are written are pronounced in accordance with the Korean method of pronouncing Chinese. To find how to write them phonetically in English, it is first necessary to ascertain the written Korean equivalent for the character and then to transliterate the latter into English. The "Manual" indicates the method of doing this. The hyphen I should say might be omitted without detriment. An idea of how to treat Korean names in this regard may be attained from examination of the most approved methods of writing Chinese geographical names.

The nomenclature of Korea as rendered in British publications until quite recently has been unsystematic. The names in the list prepared by you from British Admiralty charts, and submitted to me for inspection, are decidedly irregular, some being apparently derived from Chinese and some from native sources.

If a list of proper names of European origin applied on our maps to Korean geographic features be prepared, I will be glad to give my assistance in furnishing the names by which such are known to the Koreans themselves. This would be done by comparing names given on native and foreign maps.

In conclusion, I desire to call your attention to a book recently published, entitled "Life in Korea," by Mr. Carles, late British Consul General in that country, which contains a very fair map that may be of service to you.

JNO. B. BERNADOU,
Ensign, U. S. Navy.

The BOARD ON FOREIGN GEOGRAPHIC NAMES,
Hydrographic Office, Washington, D. C.

EXHIBIT P.

No. 144, General.]

COAST INSPECTOR'S OFFICE,
SHANGHAI, *January 16, 1891.*

SIR: I have the honor to acknowledge the receipt of your communication, No. 3195, dated the 4th of August last, wherein you ask to be furnished with—

1. Tables of Chinese-English equivalents and methods of transliteration into English of Chinese geographical and generic names.
2. Any maps or charts illustrative of this subject; and
3. Information as to the standard geographical Chinese dictionaries recognized in the Chinese Maritime Customs as authorities.

In reply, I beg to state as follows:

1. There is no uniform system of transliterating the names of places in China. The Customs Service generally takes the popular spelling, and it may be said the popular spelling is the transliteration of the local sounds of the characters by which the place is known to Chinese. Thus, Pakhoi is the local (and Cantonese) sound of the two characters representing the name of that place in Chinese. These characters, if transliterated according to the mandarin pronunciation, would be Pei hai. Then Hoihow, the seaport of the chief city of Hainan, is the Cantonese sound of the two characters pronounced locally Haikao, and in mandarin Haikou. But the native merchants of Hongkong, who are the chief traders of the place and are Cantonese, gave their name to it in the mercantile world of Hongkong, and it would be useless for any one to

employ a different sound. Generally places are written about in the newspapers under names transliterated according to local pronunciation, and, once known in this way, changes in the name are undesirable if one wants to be understood. In fact, where commerce takes hold of any way of transliterating any particular name, geographers, in order to be understood, should follow the lead thus given.

2. There are no maps or charts extant that are illustrative of the subject. The British Admiralty charts are the ones chiefly used by navigators in Chinese waters, and the names of localities as given thereon are probably in most cases the original surveyor's spelling of the pronunciation of the name of the place as it was given to him by the natives. This, of course, does not apply where purely English names have been arbitrarily bestowed.

3. The best geographical dictionary is G. M. H. Playfair's, "The Cities and Towns of China," London, Messrs. Trübner & Co., 57 and 58 Ludgate Hill, 1879.

I regret very much the long delay in replying to your communication, but desiring to furnish you with the most complete and reliable information possible, the matter was referred to the highest authority I could consult, and I received no reply till to-day.

I am, sir, your obedient servant,

A. M. BISBEE,
Coast Inspector.

CAPTAIN HENRY F. PICKING, *U. S. N.,*
Hydrographer, Hydrographic Office,
Washington, D. C.

EXHIBIT Q.

No. 1639, General.]

INSPECTORATE GENERAL OF CUSTOMS,
PEKING, *December 27, 1890.*

SIR: 1. I am directed by the Inspector General of Customs to acknowledge the receipt of your letter of the 31st of March last (No. 1455), with reference to the purpose of the United States Hydrographic Office to establish rules for the systematic spelling of geographic names, principally as an aid in the preparation of charts and sailing directions for publication.

2. During the interval of delay in answering your communication, the Inspector General has received recently from the Coast Inspector, Captain A. M. Bisbee, a copy of his proposed reply to your letter of the 4th of August (No. 3195), addressed to him on the same subject. Captain Bisbee's letter is a practical statement of the facts as they are, and has the Inspector General's approval.

3. While, however, the present method of transliterating names of Chinese ports, seacoast places and the like by surveyors, merchants and the press and public generally is what Captain Bisbee has so concisely described (if, indeed, so haphazard a process can fairly be termed a "method"), it is certainly to be hoped that in the course of time a uniform and universal system, such as the Hydrographic Office has in view, may be agreed upon and adopted by the civilized world. To further somewhat your efforts in this direction, I am to hand you the enclosed memorandum, which will serve as a reply to your inquiries.

4. The information for which you ask as to the rules adopted in the publications of this Service for the use of the hyphen, &c., will be furnished separately a few weeks hence.

I am, sir, your obedient servant,

E. B. DREW,
Chief Secretary.

CAPTAIN HENRY F. PICKING,
Hydrographer, U. S. Navy,
Washington, D. C., U. S. A.

MEMORANDUM ON THE transliteration OF CHINESE GEOGRAPHIC
NAMES, &c.

(Transmitted to the United States Hydrographic Office in general letter No. 1639,
of the 27th December, 1890.)

PEKING, *January 13, 1891.*

1. The confused "state of geographic nomenclature at present," ad-

verted to in the Hydrographer's letter, is no less a prevailing condition in existing maps of China than in other maps ; but, while the desirableness of a uniform system is readily acknowledged, yet little has been achieved hitherto in this country towards the adoption of a single standard.

2. Perhaps no more striking illustration of the prevailing variety and confusion could be found than is afforded in the diverse ways of spelling such important names as the provinces of China. Six of these names are given in the following table, according to the transliterations of the standard maps of the present day :

Keith Johnston...	Quei-chow, Sze-chuen.
Black.....	Kuei-choo, Szu-chuan.
Stieler	Kwéi = tshou. Sz' = tschwán.
Stanford.....	Kwei chau, Sz chuen.
Dr. Williams	Kweichau, Sz' chuen.
Keith Johnston...	Hoo-pe, Fo-kien.
Black.....	Hou-pe, Fu-kien.
Stieler ..	Hu-pe, Fo-kien.
Stanford	Hu peh. Fu kien.
Dr. Williams.....	Hupéh. Fuhkien.
Keith Johnston...	Ngan - whi, Chi-li.
Black.....	Ngan - hoee, Che-lee.
Stieler	Ngan - hwei. Tschí = li.
Stanford.....	Ngan hwui, Chi li.
Dr. Williams	Nganhwui, Chihli.

This, however, is only an admission and proof of the existing evil; to find a remedy for it is quite another and more difficult matter.

3. The native Chinese official authorities have not as yet felt the need of transliterating their language into Roman characters, so that no aid is to be derived from them in dealing with this subject.

4. The systems of transliteration most in favor with Europeans and Americans who study Chinese, are those of Sir Thomas Wade and Dr. S. Wells Williams.

(1) The former may be found explained in the introduction of Wade's "Tzū Erh Chi," or Colloquial Course for Students of Chinese (Second Edition, Vol. I, pp. 3 to 7 and 10 to 17; sold by W. H. Allen & Co., Waterloo Place, London).

(2) The system of Dr. Williams is given in his syllable Dictionary, Introduction, Section II, "System of Orthography." (Publishers: American Presbyterian Mission Press, Shanghai.)

5. Wade's system is usually preferred for the transliteration of the sounds of the *Mandarin dialect*, a dialect spoken in three-fourths of the empire, and studied by all foreigners in Chinese employ, and by all the consular and diplomatic interpreters, &c., of European nations and of the United States stationed in China.

(1) But, for *geographic nomenclature*, Wade's system would probably be found inadequate to transliterate the *local names of places along the coast between Shanghai and the Tongking frontier*, where the Mandarin dialect is not in use at all.

(2) To this it may be added as a further objection, that Wade's system rigidly applied to well-known names of provinces and great rivers, would produce a somewhat startling effect, at any rate in the outset; for the names of provinces, for example, which long usage has spelled Kiangsu, Che Kiang and Fukien would almost lose their identity if spelled Chiangsu, Che Chiang, and Fu Chien; and the great river of China, if printed on a map "Yangtzu Chiang," would astonish and puzzle school-boys, old and young, the world over. And yet with time this spelling would cease to look eccentric, and as a result these and many other names would get very nearly the correct pronunciation as known to three-quarters of the Chinese people.

6. With respect to Dr. Williams' system there is this to be said in its favor, viz:

(1) That the spelling already given on existing well-known maps is not so far removed from it as from Wade's spelling. In other words, the spelling on existing standard maps would not have to be so radically changed in order to be conformed to Williams' system as would be necessary were Wade's system adopted; and

(2) Williams' system, as stated above, provides for transliterating the dialects of the east and southeast maritime provinces, which Wade's does not. Hence chart makers, surveying the coast line from Shanghai to the Tongking frontier, would find in Williams, ready to their hands, a fixed and uniform system for rendering in Roman letters the names by which rocks, bays, islands, towns, &c., are called by natives on the spot.

7. There exists a third system of transliteration, viz, that of Morrison's Dictionary, a work once the favorite dictionary, but now gradually becoming obsolete. The syllabary of Morrison is given in the appendix to this memorandum, for the purpose of comparison. It expresses, or aims with much success to express, the sounds of the Southern or Nanking Mandarin, which was once the favorite speech. It resembles Williams more closely than Wade, and has largely influenced the transliterations adopted by map makers; but at this day it probably possesses few excellencies not adopted by Williams, while it is less comprehensive than Williams' system.

8. The learned societies (so called) in China have exerted no influence towards the settlement of a uniform standard of transliteration.

9. There are no standard geographical dictionaries and no established

authorities on geographical names. Playfair's "Cities and Towns of China" is fairly well known to students of China and Chinese.

10. As regards such generic names as island, river, &c., the principal ones are the following :

Bank of a river : Ngan or An.

Bar, *c. g.*, obstruction in a channel : Sha, Sha t'an, Ming sha, An sha, Lan-chiang sha.

Bay : Wan, Ao, Chiang.

Cape : T'ou, Chiao, Shan.

City : Fu, Ching (or Ch'êng), Hsien (or Hien).

Head or headland : Shan, T'ou, Chiao.

Hill : Shan.

Harbor : K'ou, Chiang (or Kiang).

Island : Tao, Su (Sen), Shan, Chow.

Lake : Hu.

Ledge : Chiao, Luan Chiao, Chi.

Mountain : Shan.

Point : Chiao.

Promontory : T'ou, Shan, and Chiao.

Port : K'ou, Chiang.

Province : Shêng (also written Shing).

Range of mountains : Ling, Shan.

Reef : Shih, Chiao, Luan Chiao.

River : Chiang (or Kiang), Ho.

Rock, rocks : Shih, Chiao.

Sea : Hai.

Shoal : Sha.

Spit, sand spit : Sha wei.

Town : Chên or Ch'êng (spelled also Chin, Ching).

Bancroft Library

No. 1654, General.]

INSPECTORATE GENERAL OF CUSTOMS,
PEKING, *March 7, 1891.*

SIR : In continuation of the Inspector General's despatch (No. 1639, general) to your address, concerning the establishment of rules for the systematic spelling of geographic names, and with special reference to section 4 thereof, I am now directed by the Inspector General to enclose to you herewith two copies of a "Memorandum on the Chinese Customs Method of Printing Chinese Names of Places, &c.," drawn up by Mr. Wm. Bright, Senior Proof Reader at the Customs Statistical Department, and also two copies of the publication "Names of Places on the China Coast and the Yangtze River," mentioned in the concluding paragraph of Mr. Bright's Memorandum.

I am, sir, your obedient servant,

E. B. DREW,
Chief Secretary.

CAPTAIN HENRY F. PICKING,
Hydrographer, U. S. Navy.

MEMORANDUM ON THE CHINESE CUSTOMS METHOD OF PRINTING
CHINESE NAMES OF PLACES, &C.

STATISTICAL DEPARTMENT,
INSPECTORATE GENERAL OF CUSTOMS,
SHANGHAI, *January, 1891.*

As early as 1857 the attention of literary men in China was directed to the need of a standard method of spelling Chinese names of places, &c.,* and at the present day that need is still keenly felt. The names of well-known places and even of some of the provinces are still to be found written and printed in a variety of ways, such as Shanghai and Shanghae; Kiukiang and Kewkiang; Tamsui and Tamsuy; Anhwei, Anhui, Nganhwei, and Nganhwui; Szechwan, Szechuen, and Ssüch'uan. In India a similar difficulty was for many years experienced, and it was not until the compilation of an official alphabetical gazetteer of the country was begun that steps were taken to systematize the diverse forms for expressing Indian proper names. To ensure the general adoption of a uniform system for spelling such names, simplicity of transliteration was in that country, as it is in China, found to be the first consideration. Scholarly accuracy had to be sacrificed to popular convenience, and hence the use of diacritical marks had, as far as possible, to be avoided. After many compromises had been made, a popular and fairly uniform system of transliteration was eventually drawn up by Dr. W. W. Hunter, which, after receiving the approval of the Government of India, was ordered to be adopted in all official publications. Several of the leading Indian journals also, finding that the new system presented no typographical difficulties, expressed their willingness to conform to it. Then, in 1881, Dr. Hunter's "Imperial Gazetteer of India," based on this system, was published, and thus uniformity in spelling Indian names of places was secured.

In this Department efforts are repeatedly made to adopt a uniform system of spelling Oriental names, but it happens not infrequently that authors prefer a system of spelling of their own, and thus, taking the whole of the Customs publications together, considerable diversity in the manner of spelling will be found to exist. With regard to Chinese names of places, the system generally adopted here is to spell the names of the provinces, of the open ports, of places well known in mercantile circles, and of places given on the official Admiralty charts, in a fixed and arbitrary manner (see list appended); while places in the interior that are not well known and can be identified by the characters attached are spelt, for the most part, according to Wade's system of transliteration. Exceptions, however, are made in the case of places invariably written in the Fuhkien, Amoy, Swatow, and Canton dialects; these are printed according to the different ports' system of transliteration, and here the need of a definite system is clearly exhibited. Generally speaking, when places are spelt according to Wade's system a hyphen separates the sounds of the different characters represented (*e. g.*, K'uan-ch'êng-tzũ, Ning-

*See "Journal of the Shanghai Literary and Scientific Society," No. 1, 1858, p. 15. (Inaugural address by Rev. E. C. Bridgman, D. D.)

kuo-fu), while when any other system is used, the hyphen is omitted and the place is printed as one word (*e.g.*, Capsuimoon, K'ungchow-fu, the *fu* in the latter case being joined to the name of the place by a hyphen). When places that formerly were not well known assume later on exceptional commercial or political importance, as, for example, K'ai-p'ing, Ch'ung-ch'ing, the aspirates and hyphen are dropped and the names are printed as one word, thus: Kaiping, Chungking. The reason for this change is that to retain the hyphen and aspirate after the name has become familiar would seem pedantic and be likely to confuse the ordinary reader, who is accustomed to see the name printed in newspapers without any such marks.

The present opportunity seems fitting to suggest that in the names of the provinces and of the open ports, at least, all accents should be omitted (*e.g.*, Chehkiang, not Chêkiang; Yunnan, not Yünnan; Wenchow, not Wênchow; Mengtsz, not Mêngtzü). Very few outside the Customs and other official circles appreciate the use of the accents, even if the accents do not in some cases tend by their presence to cause mispronunciation. One frequently hears, for example, a vowel that is specially marked short pronounced as if marked long, and thus "Mêngtzü" when so printed is enunciated as "Mengtsoo." Apart from other considerations, it is difficult to secure that in all sizes of type a sufficient number of accents is always obtainable, and the result is a lack of uniformity.

Rivers are generally expressed with the word "River" either before or after the name, as River Yung, or are rendered entirely into English, as Yellow River; but when expressed otherwise, in the case of names of rivers that are well known and the spelling of which has become somewhat fixed, that spelling is employed, as, for instance, the Peiho, the Yangtze or Yangtze-kiang, the Hwangpu.

Names of places, &c., in adjacent countries are spelt generally according to some recognized authority; with Indian names and names of countries adjoining India, for example, the spelling given in Hunter's "Imperial Gazetteer" would be adopted.

Names of Chinese not known to employ a special English rendering of their name are transliterated according to Wade's system, the *ming* (or *hao*) being separated from the *hsing* by the use of a capital letter, and when the *ming* (or *hao*) is composed of two characters the sounds are connected by a hyphen (*e.g.*, Chang Chih-tung, Liu K'un-i).

In the case of vessels bearing Chinese names, these names are, as a rule, printed as one word (as *Kiangtung*, *Chinfeishu*, *Fukhong*), the system of transliteration used being that furnished to this Department.

Ordinary common Chinese words are generally rendered according to Wade's system, the use or omission of the hyphen between the words being determined by the meaning of the words connected and their common use. Some words, however, in common use have obtained a certain fixity of spelling, and in such cases that spelling is adopted (*e.g.*, Oolongs, Pingsueys, &c.; likin, &c.; samshu, yamên).

Appended is a rough list showing the spelling generally adopted in this Department to express the names of the provinces and of the more

familiar places, &c., in China and of some places in adjacent countries. The names of other places on the coast, &c., will be found in the "Names of Places on the China Coast and the Yangtze River."

WM. BRIGHT.

List of Places, &c.

Amoor (River).	Kiangyin.	Shamien.
Amoy.	Kioto.	Shanghai.
Anhui.	Kirin.	Shanhaikwan.
Annam.	Kiukiang.	Shansi.
Anping.	Kiungchow.	Shantung.
Bangkok.	Kobe (Hogo).	Sheipu (Roadstead).
Bhamo.	Kowloon.	Shekkok.
Burma.	Kuchinotzu.	Shengking.
Canton.	Kulangsü.	Shensi.
Caobang.	Kuttai.	Shimonoseki.
Capsuimoon.	Kwanchiap.	Siam.
Changchow.	Kwangchow (Prefecture).	Sicawei (Shanghai).
Chapoo.	Kwangsi.	Sinza (Shaughai).
Chefoo.	Kwangtung.	Soochow.
Chêkiang.	Kweichow.	Sourabaya.
Chemulpo (Jenchuan).	Lamma (Island).	Sumatra.
Chienshan.	Langson.	Sungei Ujong (Borneo).
Chihli.	Laokai.	Swatow.
Chinchew.	Lappa.	Szechwan.
Chinkiang.	Lazareff (Port).	Tahu (Lake).
Chungking.	Liaotung (Gulf).	Tainan (Formosa).
Chusan (Archipelago).	Lienchow (Peninsula).	Taipei (Formosa).
Corea.	Loochoo (Islands).	Taishek (Barrier).
Deli (Sumatra).	Lungchow.	Taiwan.
Foochow.	Luzon.	Taiwan-fu.
Formosa.	Lyemmoon (Pass).	Takow.
Fotochow.	Macao.	Taku.
Fukien.	Majico Sima.	Tail-fu.
Fusan.	Malowchow.	Talienwan.
Hainan.	Manchuria.	Tamsui.
Haiphong.	Manhao.	Thatke.
Hakodadi.	Manila.	Thibet.
Hangchow.	Mapai.	Tientsin.
Hankow.	Masampo (Corea).	Tokio.
Hanoi.	Mauka (Saghalien Island).	Tonkin.*
Hanyang (Seoul).	Mêngtzü.	Touren.
Hogo (Kobe).	Moukden (Shêngking).	Tsungming (Island).
Höbel.	Nagasaki.	Tsuruga.
Hoihow (Klungchow).	Namoa.	Tsushima.
Honan.	Nanking.	Tungchow.
Hongkew (Shanghai).	Newchwang.	Tungting (Lake).
Kongkong.	Nicolajevsk.	Turkestan.
Hné.	Niigata.	Twatntia.
Hukwang (Provinces).	Ningpo.	Vladivostock.
Hunan.	Osaka.	Weihaiwei.
Hupeh.	Pakhoi.	Wênchow.
Hwangpu (River).	Pechili (Gulf).	Whampoa.
Ichang.	Peiho (River).	Woosung.
Ili.	Peking.	Wuchang.
Ilo-Ilo.	Pescadores (Islands).	Wuhn.
Imperatorsky.	Philippines (Islands).	Wnsieh.
Irkutsk.	Pootung.	Yangtze (River).
Java.	Quelpaert.	Yangtze-kiang (River).
Jenchuan (Chemulpo).	Quinhon.	Yantai (Chefoo).
Kansuh.	Saghalien.	Yingtzü (Newchwang).
Kehung.	Saigon.	Yokohama.
Kiakhta.	Samarang.	Yuen sui.
Kiangsi.	Sandakan (Borneo).	Yünnan.
Kiangsu.	Seoul (Hanyang).	

*This has recently been changed from "Tungking."

EXHIBIT R.

No. 592.]

LEGATION OF THE UNITED STATES,
MEXICO, *April 8, 1891.*

SIR: I have the honor to transmit copies of correspondence relative to certain data sought by the Hydrographic Office, U. S. N., on Mexican geographical names, with a request that you will kindly convey this information and the enclosed publications to the Hydrographic Office at Washington, D. C.

I am, &c.,

THOS. RYAN.

To the Honorable JAMES G. BLAINE,
Secretary of State.

[Sub-enclosure.—Translation.]

DEPARTMENT OF PUBLIC WORKS, COLONIZATION,
INDUSTRY AND COMMERCE. GENERAL BUREAU OF
STATISTICS OF THE MEXICAN REPUBLIC,
MEXICO, *April 4, 1891.*

In reply to your favor of the 16th of March last, I have the honor to send you for the use of the "Board of Geographical Names" of the United States, a copy of the following publications:

Memorial of this Department for the year 1865.

Annual to the National Astronomical Observatory for the year 1884.

Nos. 2, 3 and 4 of the Bulletin of Statistics and the names (geographical) of Tabasco.

The foregoing publications this Department is persuaded will be of use to the said Board.

Liberty and constitution.

M. FERNANDEZ LEAL,
Sub-Secretary.

